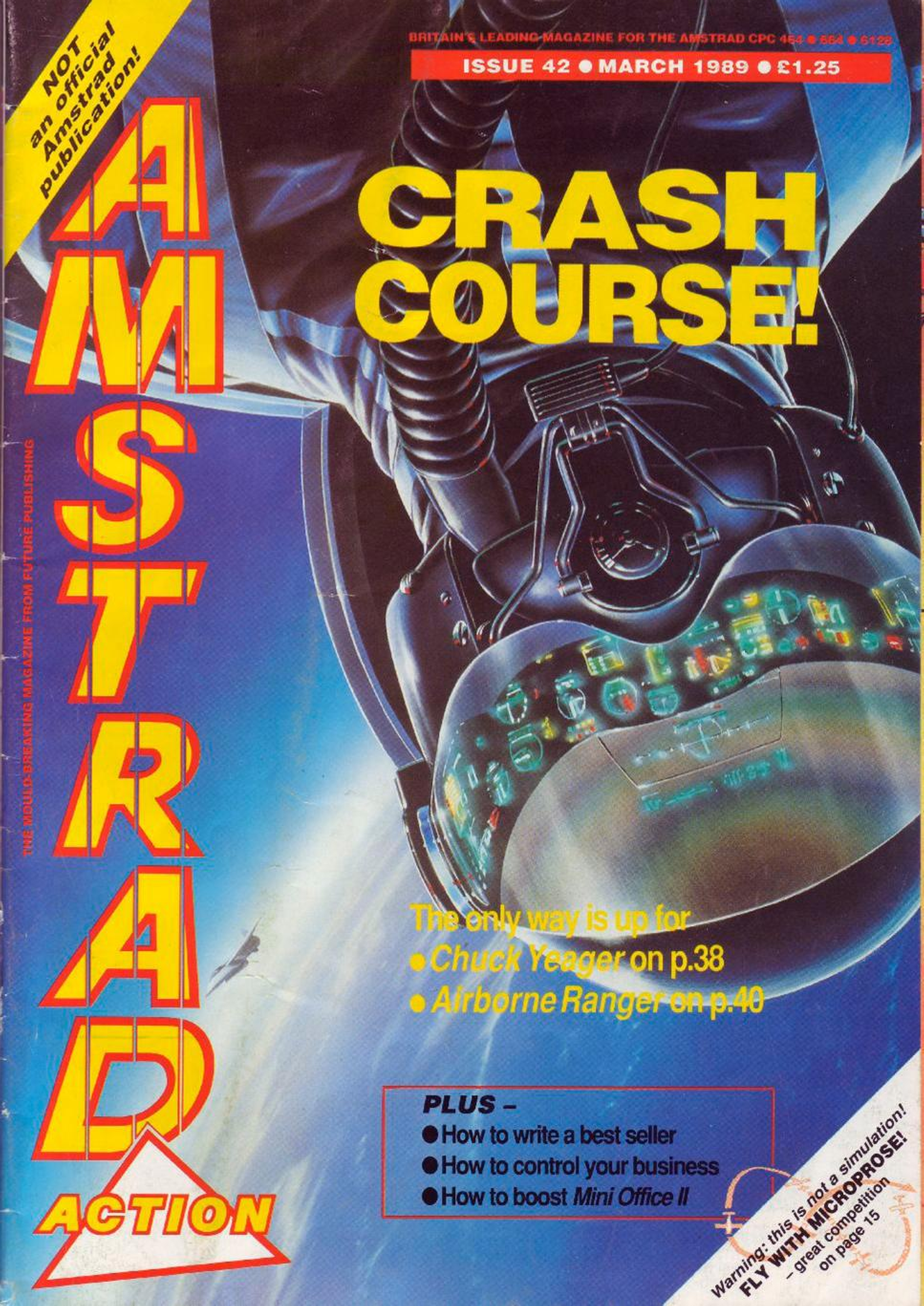
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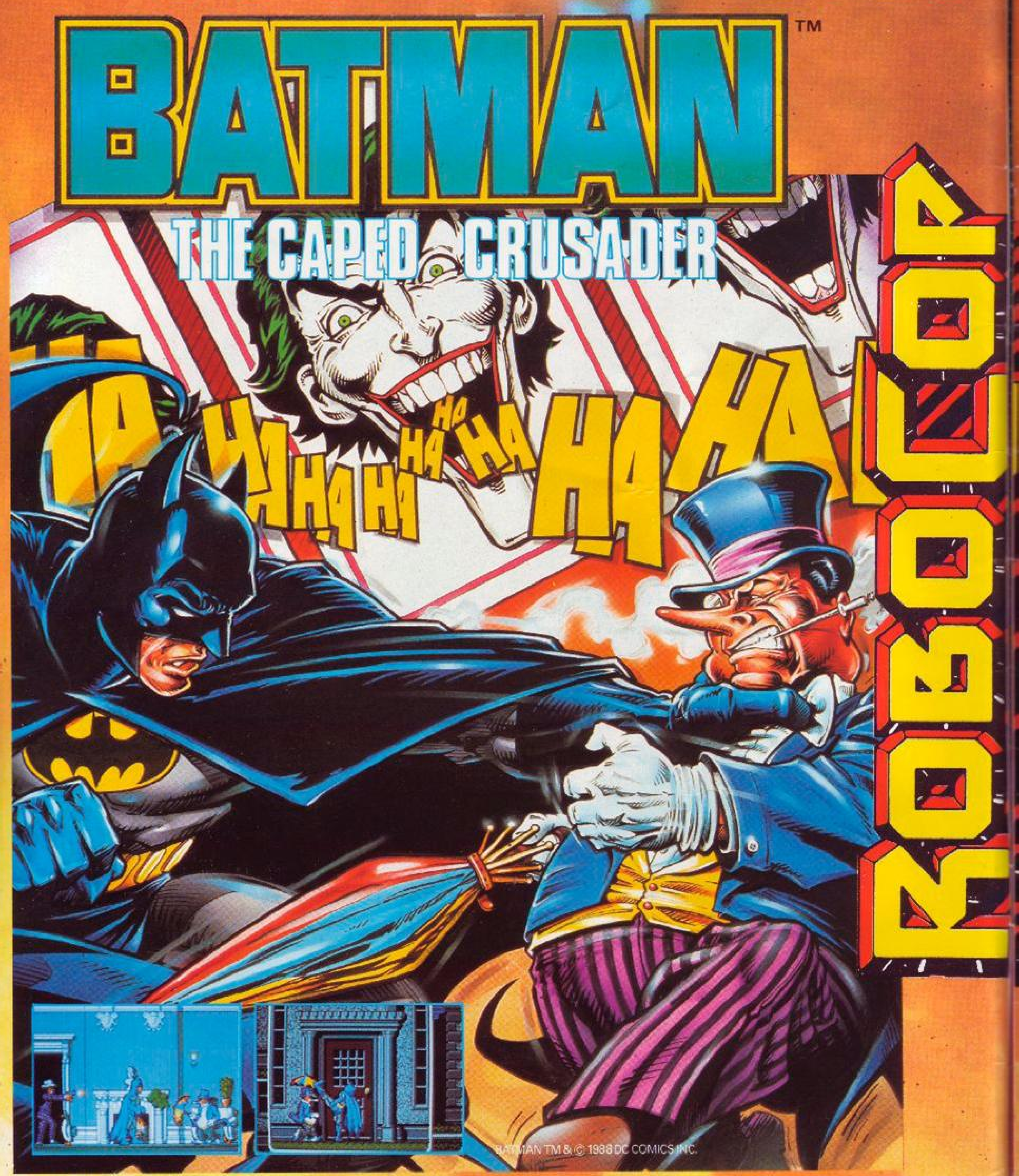
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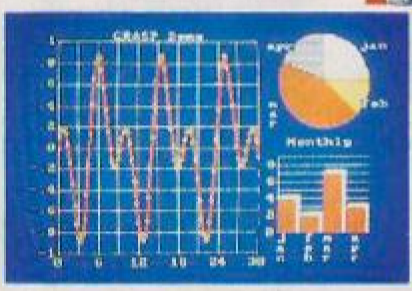
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THE ACTION BEGINS ON 37!

ALL THE TOP CPC GAMES



Vs



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GOOD NEWS!

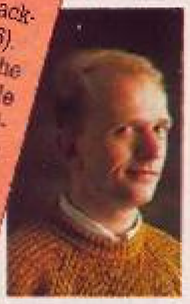
Suddenly everything is looking hunky dory for the CPC. Lots of 6128s were sold over Christmas, and software suppliers report buoyant sales of games and serious software, too. And even now, in the traditionally slack New Year period, it looks as if this good news is set to continue.

Just look at the games appearing this month. Both *Airborne Ranger* (see p. 40) and *Chuck Yeager's Advanced Flight Trainer* (p. 38) are superb simulations, and are sure to be strong contenders when we get around to deciding our Top Ten of '89. Indeed, I wouldn't be at all surprised if one of them was the game of the year.

On the serious side we have a brand new integrated accounts package (reviewed on p. 20), and a 'turbocharger' for *Mini Office II* (on p. 16).

There is another item of good news for the CPC too, and that's the arrival of Trenton Webb, our new games reviewer. It'll take him a while to settle in, and I hope you'll give him the traditional *AA* readers' welcome (such as tons of letters, cheats, hints, tips, suggestions – you know the kind of thing!). But even in his first month he's written some brilliant reviews – *Action Test* begins on page 37, by the way. And he's got a great sense of humour, too!

Steve



▲ He-ee-ere's Trenton! Not quite as wacky as his name might suggest.

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CPC sales 'go crazy'

The unexpected success of CPC sales in both hardware and software has put pressure on Amstrad to cut prices.

Recently compiled figures for the vital Christmas period – when sales of machines and games reach their peak – have shown that the CPC is continuing to do well. And despite Amstrad's firm refusal to date to cut the listed price for the range, Dixons, Laskys, Comet and Toys'R'us were all able to offer substantial discounts.

Popular Computing Weekly quoted Dixons as selling more CPCs than Commodore 64s, but Comet appears to have done best of all on hardware sales. Dave Webb, Senior Salesman at Comet's Selly Oak store in Birmingham, said that sales before Christmas had gone 'very well... It was unfortunate though that in the week before Christmas we just couldn't get hold of stocks. We were getting three to five enquiries a day that we could do nothing about'. The Home Entertainment Centre had not been a big success, Webb said.

Comet sales 'meteoric'

Comet in Birmingham had dropped the price for most combinations by £100, selling the 6128 with colour monitor for £299, and the 464 with colour monitor at £199. Webb guessed that his branch had sold perhaps 50 to 60 for the six weeks before Christmas, and could have sold



● Yule loved 'em: *Giants, Four Soccer Sims* and the ever-green, recently repackaged *Mini Office II*

as many as 20 to 30 a week if the stocks had been available.

In Liverpool the new Sefton Walk branch of Comet, which opened shortly before Christmas, appeared to be selling CPCs in considerable numbers.

In stark contrast Tricia Steadman, manageress of Liverpool's huge Bits and Bytes store, said that sales of hardware had been 'hopeless... pathetic'.

Long overdue

The CPC is long overdue for repricing to restore its competitive edge against the Amiga, ST, Cbm 64 and Spectrum. Amstrad's limp response has been to experiment by offering its Home Entertainment Centre exclusively to the Comet high street chain. Comet took substantial stocks of the CPC range – enough to enable it to cut official prices in some areas by as much as £100.

This has not pleased smaller independent retailers, who have found themselves unable to buy wholesale as cheaply as Comet was selling to the public! Some have sarcastically offered to save Amstrad distribution the trouble of delivering, by fetching supplies from Comet's shelves!

Software hard sell

And while hardware was continuing to sell in steady quantities for some high street stores, the strength of software sales took many by surprise.

Tricia Steadman of Bits and Bytes, said software had sold 'very well indeed'. US Gold's *Giants* and *Thunderblade*, Codemasters' *Four Soccer Simulators* and Ocean's *Operation Wolf* had all been 'very successful', while *Double Dragon* and *Afterburner* would have been, had they made it to the shelves on time.

Ken Fairhurst of K&M, a mail-order company specialising in CPC software, offered an estimate that sales were up '3,000 per cent on last Christmas'. This figure included ten copies a day of *Mini Office II* and 5,000 3" disks a month, he claimed.

And Mike Cooper of MJC Supplies told the same story, with 'twice or three times as much as last year' his estimate.

Codemasters get themselves in a Dizzy

An embarrassing bug has come to light in Codemasters' latest budget game, *Treasure Island Dizzy*.

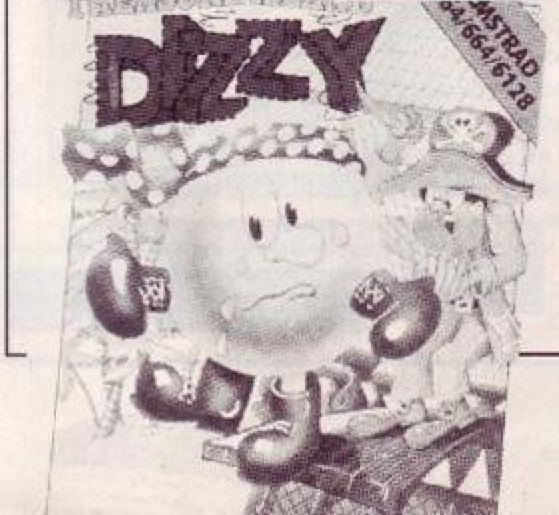
Some copies of the first batch of the game *(reviewed on page 42 this month)* bought by the public are seriously bugged, causing the game to freeze when the 'loveable' character enters the water with his snorkel on. It seems that some confusion between the game's programmers, Philip and Andrew Oliver, and Codemasters resulted in an unchecked master being sent for duplication.

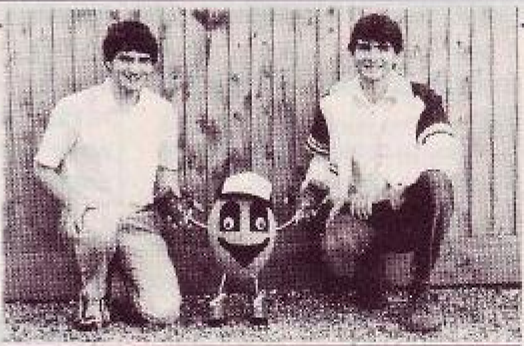
'We've had about 20 or 30 calls here', Richard Darling told *AA*: 'so it was clear that some copies had got into circulation'.

Two batches of 7,000 copies were duplicated by two different companies Tudor and Stanley, from what were thought to be identical masters. It was two or three days after first copies had gone out to the main distributors, prior to delivery to the shops, before the bug was discovered. 'It could be over a thousand that got into the shops initially', Darling admitted, 'though we believe we've recovered most of them'.

The problem has proved expensive for Codemasters, who are now stuck with 7,000 useless copies.

● Dizzy II: 'bugged'





● The Oliver twins and Dizzy. Dizzy is in the middle

Anyone who bought a bugged version should either return it to the shop where they bought it and have it replaced – later copies don't suffer from the bug – or phone Codemasters (☎ 0926 814132). 'It's obviously expensive, and a nuisance for us', Richard Darling admitted: 'but we'd rather that than upset our customers'. Their playtesting system has now been changed, he added: 'Before we'd test one master extensively, and the other one just to check that it loads. Now we're being more careful'.

Art Studio is back in the frame



● OCP's *Art Studio*: back soon



● Bill Richardson, EEC MD

The easiest to use art package for the CPC is making a comeback.

The Advanced Art Studio – written by Oxford Computer Publishing's James Hutchby and distributed by Rainbird – has recently been unavailable, much to the annoyance of retailers and mail order firms who found themselves in the unusual position of having orders they couldn't satisfy.

'Very soon distributors will have all the copies of *Art Studio* they want', Bill Richardson, owner and managing director of EEC, told *AA*. 'It was the first serious wimp driven graphics program, and with the advanced versions now available it's still "best of its kind" in the utility graphics field'.

Rainbird originally bought the licence from OCP against royalties. *AAS* enjoyed a considerable success, but late last year Rainbird decided to allow the licence to lapse. 'We've been very happy with the Rainbird licencing deal', Richardson said: 'we owe a great deal to BT, Rainbird's parent company, for helping us to continue development of *The Art Studio* range, and we're happy to buy back the licence and sell it ourselves direct'.

Meanwhile, OCP had gone into liquidation, with its assets and rights passing to another company, EEC. EEC recovered the licence from Rainbird, together with a large pile of unsold stock (Spectrum, not Amstrad).

The new prices – slightly lower than before – are £15.95 *(Art Studio)* and £19.95 *(Advanced Art Studio)*.

Appropriately enough, the relinquishment of Rainbird's interest in the *Art Studio* range frees them to concentrate their attention on *Weird Dreams*, written by James Hutchby – author of *Art Studio*.

Learn with a smile

A new educational program has been released by Database Software.

Fun School 2 is available in three versions – for under six year olds, six to eight year olds and over eights.

Under sixes, for example, get eight programs, from teddy counting, spelling and guessing games to shape identification, colour spotting and moving round a teddy bears' maze.

'Learning has never been such fun', Database's Mike Cowley said: 'and both children and teachers have told us so. We've done extensive tests in the north of England for *Fun School 2*, and we think it's the perfect combination of learning and fun'.

Fun School 2 costs £9.95 (tape) and £12.95 (disk). Look out for the full review in *AA* next month.

Database ☎ 0625 878888.



● Learning *can* be fun, insist Database

● Minerva System's *Random Access Database*, which we mentioned last month, is not £39.95, as we said, but £29.95.

Minerva ☎ 0392 37756.

Take the safe upgrade route

A new company is offering a 'safe upgrade' for owners of 464s and 664s.

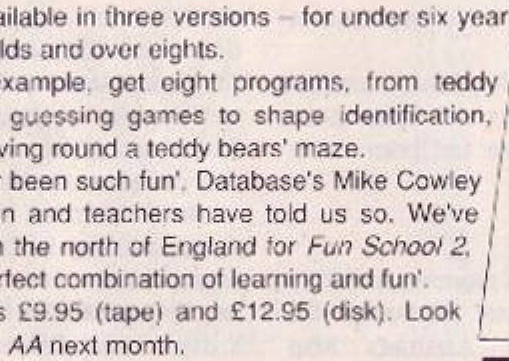
If you're not technically minded, but want to upgrade your machine to a 6128, all you have to do is pack up your machine and send it off. VSE Technical Services, based at the Mercury Asset Management Centre in London, will do the rest.

'If you don't know what you're doing you could damage your machine', Tim Morris said: 'double sided boards are involved, and without extreme care when desoldering the holes and so on you could end up worse off than before you started!'

The upgrade includes a 40025 ROM, a dk'tronics 64K memory pack and a CP/M Plus system disk.

The usual price is £87.70', said Tim: 'but we're offering your lovely readers an £8 discount, taking the whole thing – including VAT and postage – down to £79.70. Just say in your letter you read about it in *AA*, and we'll do the rest!'

VSE ☎ 01 738 7707.



● VSE's 'safe upgrade': send them a 464 and they'll send you a 6128 (minus disk drive, anyway)

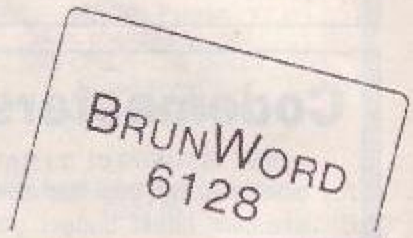
New *Brunword*

A new 'Junior' word processing program has been released by Brunning Software, the company that gave the world *Brunword* and *Infoscript*.

Brunword Junior costs £12.95, and has all the features of the £25 *Brunword 6128* – bar two. 'The text area is reduced to hold a generous page of text', Peter Brunning told us, 'and you can't add words to the 30,000 dictionary'. The deal includes an on-disk tutor – 'but we're skimping on fancy packaging'.

'Youngsters and people new to computers in general and word processing in particular will find everything they need in *Junior Brunword*', Brunning claimed: 'It's a stepping stone. Eventually people will want the full version, and they can upgrade for £12.95'.

Brunning Software ☎ 0245 252854.



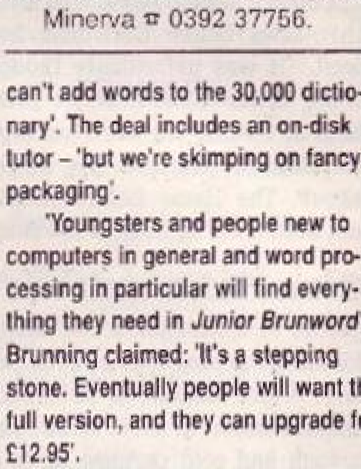
● Now *Brunword* goes 'Junior' – a sawn-off version

Hard desk for CPCs

Furniture has always been in short supply for the CPCs, so a warm welcome please for possibly the sturdiest and at 45lbs – or 20kg as you youngsters would call it – certainly the heaviest desk yet produced for the Amstrad.

The welded steel structure features castors to save you putting your back out, and the desk is likely to outlast not only your computer, but your house as well. A nice idea is the inclusion of three one metre extension leads.

Cost including p&p is £69.50 from Organisers ☎ 0902 338423.



● Organisers' CPC desk – love it or ignore it, you can't lift it

CPC gun coming soon?


● Electric Studio's Light Pen: gun to follow?

Electric Studio, producer of the ever popular Electric Studio Light Pen, has announced plans to release a light gun for the CPC.

Dave Buckingham, head of Electric Studio, is looking forward to the introduction of the new add-on. 'We've already got a working prototype, and now we're putting it into production', he told *AA*. He also indicated that his company are themselves also in the process of developing software for the light gun.

Peter Phillips, marketing man behind Electric Studio, is a little more cautious: 'The resurgence of interest in the light pen at Christmas made us look at the CPC again', he said, 'and we believe there could be considerable interest in such a device'.

Light guns are pistol shaped controllers that work in a way similar to light pens. A signal is transmitted out of the monitor along with the normal picture. When the gun 'sees' this signal (by means of a receptor mounted in the barrel) it flags the computer, which works out where the gun is pointing on the screen. A trigger is also built in, enabling the user to 'shoot' what the gun is pointing at on the screen.

This sort of add-on is ideal for games such as *Operation Wolf* by Ocean or Infrogrames' *Prohibition*, which involve moving sights (usually crosshairs) around the screen and blasting the opposition. People prefer playing shoot-em-ups to the highly skilled flying games so 'duck-shoot' games are in. They could receive a massive boost with the added 'arcade' attraction of a light gun.

The fate of the light gun lies with software companies. Electronic Arts Development Officer Kevin Shrapnell commented: 'We would implement it, supposing that it was compatible with our projects – well, perhaps it would be better to say that we've no reason *not* to include it. It would have to be easy to implement: I'm not too sure about this idea – it's the first time I've heard about it.

'Mind you', he pointed out, 'there is a precedent in the bewildering number of joystick interfaces for the Sinclair Spectrum. Developers have been given all the technical details on how the different systems work. If we receive information on how to use this light gun, then we're in a position to include the option. Right now we're not'.

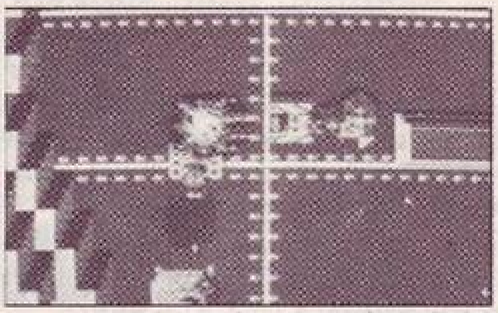
The experience of US Action, who produce a light gun for the Amiga, suggests that the main battle is to convince software houses to include a suitable sprite collision routine that enables the light gun to work with particular games. The gun works only with US Actionware games, and is therefore severely limited in its appeal.
US Action have no plans for a CPC version.

Electric Studio ☎ 0462 420222.

Domark scoop Atari

Domark has secured the contract to convert Atari 'coin op' games for the CPC until 1991.

The licence, to be titled Tengen, is to publish and market the software in the U.K., Europe and Australia. This should standardise conversions and, claim Domark, lead to a more faithful reproduction of the original than has been the case in the past, with different software houses handling different arcade/home computer swapovers. 'Domark will be able both to build consumer loyalty and to bring out the next Atari games arcade hit in CPC versions featuring optimum programming quality', Mark Strachan – joint managing director and the 'mark' in Domark – told *AA*.


● Coming soon: *Vindicators*

The first game to undergo the Domark treatment is to be *Vindicators*, a futuristic tank combat game with a two player option. It is to be followed by four other conversion releases this year: *Xybots* (zap'em), *APB* (arrest'em), *Dragon Spirit* (burn'em) and *Toobin'* (river rafting in an inner tube).

'We've always supported the CPC', Strachan boasted, 'and in *Vindicators* the Amstrad's colours makes it an even better conversion than on the CBM 64 or Spectrum'.

Vindicators is a multi-directional, 3-D game featuring battle tanks which have to be driven through 14 space stations.

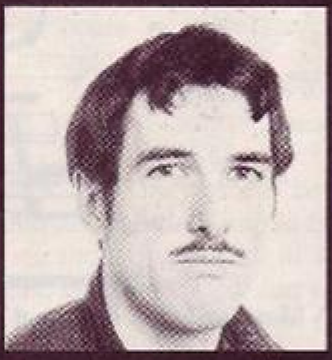
Watch the skies – the reviews are coming!


● Wacky funsters Dominic Wheatley and Mark Strachan of Domark discuss the finer points of marketing strategy

Weird Dreams for the jung and easily freudened

If you've been watching TV a lot lately you may have seen *Weird Dreams*, a section of TVS' Saturday morning *Motormouth* show.

Soon you will be able to experience the same sensation on the CPC, when Rainbird publish the home computer version. You too will be able to beat the maggot monster with a fish – in the comfort of your own home! The game was programmed by EEC's James Hutchby, author of *OCP Art Studio*.


● James Hutchby, author of *Weird Dreams*

Reagan returns!

Just when you thought it was safe to go back to the White House, the ghost of Ronnie Reagan rears its head in the form of a new game from Activision, bearing the title of the 'great' man's brainchild, *SDI*.

The game is in essence a space shoot 'em up – just like the real thing. Not entirely the most original concept for a game, but we'll let it speak for itself when reviewed. Hats off to Activision though they've not only beaten U.S.A.F. to the punch by a couple of decades, but they've done it for a few billion dollars less – and it works (probably)!

Musical snippets

● Music lovers look out! Coming soon to *AA*, the first review of a brand new Multi Track Step Time Midi Sequencer, from Foundation Software. 'It's the only step time sequencer available for the CPC range', Foundation's Chris Owen claimed.

The Midi Sequencer costs £29.95 from Foundation ☎ 0252 543945...

● *Last month in our review of* Netherworld *we gave the credit for the 'excellent continuous tune' to the wrong chap.*

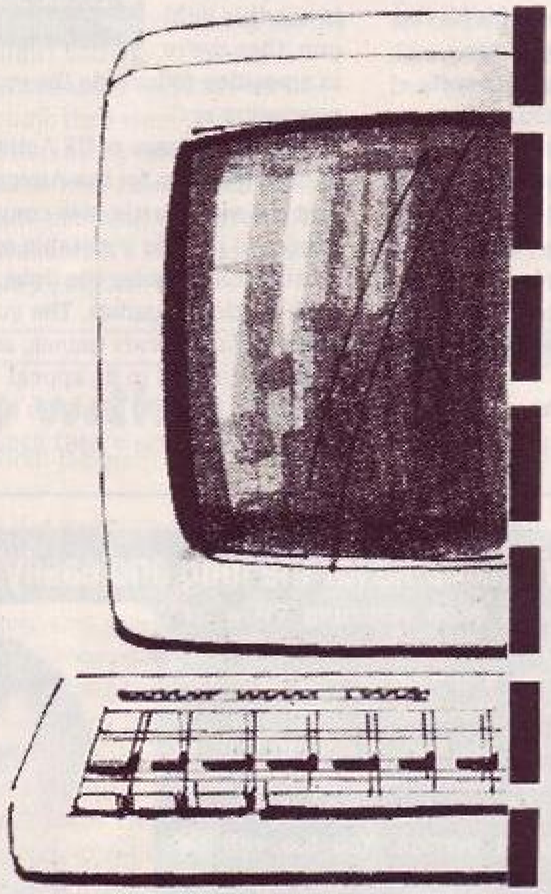
Step forward and take a bow, Dave Rogers, who writes for Hewson...

● Finally some bad news: the *Advanced Music System* distributed by Rainbird has been dropped. But watch this space...

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Yours sincerely,



Alan Sugar
Chairman AMSTRAD Plc

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REACTION

Dear AA, I wish to protest most strongly...

Letters, pray!

Whether it's our reviews, the games that get released these days, the price of disks or whatever, no doubt something in this issue of *Amstrad Action*, or something that happens to you this month, is going to a) get your goat; b) tickle your fancy; c) rub you up the wrong way, or even; d) all of the above.

But don't just keep it under your hat – let off steam! We care, and listen. Every single letter received is read, and we publish as many as we can. And one letter each month wins a software voucher for £15!

Get the writing paper out – or your printer – and write now to: *Reaction, Amstrad Action*, 4 Queen Street, Bath BA1 1EJ.

Ex-static

With regard to T.C. Hockney's letter (*AA*41), what he is noticing coming off TV screens is no more than static electricity. Dust sticks to a screen because of the screen's negative charge – like attracting bits of paper with a comb after brushing your hair.

All computer monitors emit electromagnetic radiation – like X-rays. You cannot feel, see or touch this radiation, yet as you sit in front of your CPC you are being continuously bombarded with it. It is this radiation which is causing all the trouble.

Many other computer manufacturers, such as IBM, have cut down on these rays by constructing earthed metal casings around components. Amstrad do not, so the emissions from the CPC's screen is probably higher than professional VDU operators.

No conclusive evidence has yet been found either for or against the VDU argument, but if anyone is worried take regular short breaks away from the machine every couple of hours. You'll probably have eyestrain by then anyway, but that's another story.

John Ambrose
Nuneaton

Thanks a bunch John, I'll bear it in mind. You've got me all worried now!

Eulogy for my joystick, now defunct

Rest in peace, oh joystick, my plastic pal,
Whose pixel precision did never fail
And whose trendy colours – black and red –
Will no more delight me, now that you're dead.

You served me well, though cruelly treated,
Did not protest when overheated,
You did not complain or start to bawl
When I smashed your circuits against the wall.

Mere mortal that I am, I failed to notice
The warning sparks, the rigor mortis.
The wisps of smoke on me were lost:
You did not tell me your wires were crossed.

Do not sigh because you are no longer able
To increase those figures on the high-score table;
For you will always be a most precious thing
Until I get my paws on a Konix Speedking.

£15

Cathy Thrower,
Barking

Your sad tale of woe made all of us cry –
Big Pat was in tears and so was I.
Trenton was weeping, though he tried not to sob:
('Cos if we think he's soft, he's out of a job!)

That terrible feeling when your joystick just goes
Is a bitter experience each one of us knows.
But Cathy, your tale has a happy ending,
For a £20 token to you we're sending!

No link

In *AA*40 I came across the 'Online' article in which Pat McDonald looked at Microlink.

I have been a subscriber to this service for approximately nine months so far. I initially became interested in Microlink because they were offering the chance to download pictures from the weather satellites onto the CPC – or so they said!

Pat McDonald also seems to be under the impression that this is possible using the CPC.

When I tried again recently to access this information, it became obvious that the software required to decode the pictures is only available for the Atari ST, BBC Micro and the IBM PC and compatibles.

The program for the CPC along with the PCW and Atari 8 bit are shown as coming soon! I don't know how long 'soon' is, but I am getting fed up waiting. I shall have to consider seriously not renewing my subscription to Microlink unless they remove the proverbial digit post-haste.

So, Mr McDonald, if you know something about this which I, and I'm sure other readers, must have missed, please, please let us into the secret.

Mr P Hampson
North Walsham

A Microlink spokesperson admitted that the program had gone AWOL during last year, but said that it had been taken out to be 'upgraded and speeded up'. By the time you see this, Microlink assure us, it will be back on stream. 'Yes, that's a promise', the spokesperson said.

Strong protext

I recently bought *Protext* on disk, my choice being influenced mainly by your review of it in *AA*18, including the statement that *AA* had switched over to it from *Wordstar*. The one thing that bothers me is that I cannot achieve a two or four column page, the way the text appears in *AA*. How do you manage it?

Paul Maxwell
Lanark

I think you may have been misled just a little, Paul. In fact we do indeed write all of AA *on CPC's using* Protext, *but the page layout and so on – the 'Desktop Publishing', as it's called – is done using £3,000 Apple Macintoshes and a £1,000 DTP program (*Quark Xpress Version Two, *since you ask, and did you know that James Joyce coined the word 'Quark'?).*

So we don't rely on Protext *to produce two, three or – as on this page – four column text.*



● *Protext* – not for multi-column text

Violence: the very last words

*Last month we printed two letters from **Wm A.C.C. Smith** of Windsor on the subjects of violence and bad language in computer games. Here's a selection of your replies..*

Sense and nonsense

After reading the farcical letter by W. Smith in *AA41*, I feel I must write to you regarding violence and computer games.

Today's society is a violent one but we cannot say with certainty that it wasn't just as violent ten years ago. Why? Because of the media. Newspapers are more widely read today than before, more people watch television and also because of the fact that communications as a whole have improved immeasurably. The result is that even the lesser (though no less serious) acts of violence are more widely reported.

So, people hear more about violence and begin to wonder, 'It wasn't like this when I was young, why are people (though they usually think of teenagers) doing this?' They then look around at what children have now which they didn't have before. What they are actually doing is looking for a scapegoat. We've all done it – you make a mistake doing something, someone tells you and you try to blame something beyond your control.

Television, rock music, alcohol and videos have all been blamed but most people have access to, and feel they may understand, these things and their effects. So, the blame must lie (as some obviousy think) with something that is relatively new, is not fully understood by the masses and is used to a large extent by the younger generation. The ideal candidate is the computer! These blinkered people fail to see the problem may have arisen due to the increasing teenage population, the sentences imposed by the courts, racial friction, just to mention a few. Why blame the present generation? Could previous generations and the Establishment (government, courts etc) not be to blame in any way?

Can it not be accepted that computer games provide an element of escapism? They may annoy, perplex and frustrate but also relax and entertain people. Playing a game can remove you from the everyday worries, it improves hand-eye co-ordination and concentration (invaluable for people with a mental handicap) and instils a sense of achievement when the game is completed.

I like to think I have a good imagination but I could in no way imagine that being able to destroy a sprite on a 14" monitor would bestow me with the strength, power etc. to actually start committing similar acts of violence for real.

The argument against computer games isn't ridiculous. It isn't, because there is no argument. Behavious is rarely changed by a single factor. It takes a sequence of events and the influence of environment, mood, interpersonal relationships (and many more things besides), and it is mainly the consequences of a behaviour which determines whether or not an action is carried out. If the consequences of behaving in a certain way are unpleasant, you are less likely to perform in that way. After all, those older people who are now complaining about computer games probably consider themselves well-adjusted, mature people, yet who is to say that *their* parents did not think the same about influences in their children's lives?

It *is* a fact that the nation's IQ is rising, so give us some credit for having brains and being able to distinguish between fantasy and reality!

Mark Riley,
Registered Nurse
for the Mentally Handicapped,
Whatlington

Couldn't agree more, Mark, with everything you say. You put it rather well too, if you don't mind me saying so.

We give you our word...

Having forked out the tidy sum of £1.25 for the February issue of *Amstrad Action*, I was less than pleased to find that you had devoted a full page to the infantile ramblings and overblown cliches of one Wm A.C.C. Smith.

Should this joker submit any more letters to you, I suggest you forward them to the *Beano*, where he, at least, will find a readership with a similar mental age to himself.

Charles Wood
Camberley

Don't worry, Charles: you won't be reading any more letters in AA from Wm A.C.C. Smith, I can assure you! Er, that is, if you don't read this next one...

Don't read this, Charles!

Your comments on my two letters are barely worth a counter-response: nevertheless, I will make a few remarks.

In the first instance, I do not try to impress with long words. My standard of education demands that I use the English language with care and consideration. If you and your readers do not like the way I express myself, then that is your, and their, privilege, but it does not give you the right to adopt a sneering attitude.

Christ was the only man without sin, yet I would remind you that He was 'extremely angry' when He found moneylenders in the temple, and overthrew their tables.

In conclusion, if my letters are just so much rubbish, why on Earth did you waste valuable space printing them?

Wm. A.C.C.Smith,
Windsor

Quite so. (Sorry we didn't have space to print all of your latest letter.) This correspondence is now firmly closed.

●Questions and answers

Concerning all this fuss about violent computer games:

Q: What is needed to stop all this fuss over violent computer games?

A: An article in the *Independent* saying how they benefit stable childhood development by weakening the eyesight of the more persistent players, which has been proven to reduce street crime, as no myopic youth is going to start any trouble whilst wearing NHS spectacles.

Q: What is 'gutter etymology'?

A: The study of language emitted by insects as they fall off the kerb – oops, sorry, that's gutter entemology. It's the study of the development of words whilst falling off the kerb.

Q: What are the 'despised and old-fashioned virtues'?

A: Slavery, poverty and ZX81 RAM-pack wobble.

Q: When do illustrations leave nothing to the imagination?

A: When your imagination is either over-active or non-existent.

Q: List two of Mr Smith's 'unfair share of vices'?

A: 1) writing silly letters; 2) getting two of them published in the same month.

Q: Which came first: Mr Smith's letters or the well-argued replies?

A: Neither, they were written simultaneously by two unattended PCW's in parallel universes by pan-galactic anthropoids.

Q: Why are you unaffected by violent computer games?

A: Because I am not clever enough to relate a few badly drawn pictures on a video-screen to real life.

Dean Cracknell,
Alton, Hants

Thanks for that, Dean. Don't know where we'd be without you.

By the way, just in case you suspected otherwise, we did not invent Wm A.C.C. Smith. He does exist, honest, though I must say filling the letters pages of AA for the last couple of months would have been much more difficult without him. (That partly explains a point in a later letter, but I anticipate myself.)

Take a bow

Thought you might like a nice story, for a change.

I bought Domark's 'new' version of *Trivial Pursuit* as a Christmas present. Fortunately I tried it out on my own CPC before wrapping it up – and, yup, you guessed, it failed.

On Tuesday 20 December I returned it to Domark, adding that I didn't expect that it was possible for them to replace it prior to Christmas, even though it was a present.

Amazingly, though, Domark came up with the goods – literally – just three days later. I had a new and perfect copy by express post, despite a postal situation they could do absolutely nothing about.

If only all software houses cared about their customers so much!

I won't forget what Domark did – just as I won't forget one or two other houses who could learn a thing or two from Ferry House in Putney.

Jenny Randles,
Stockport

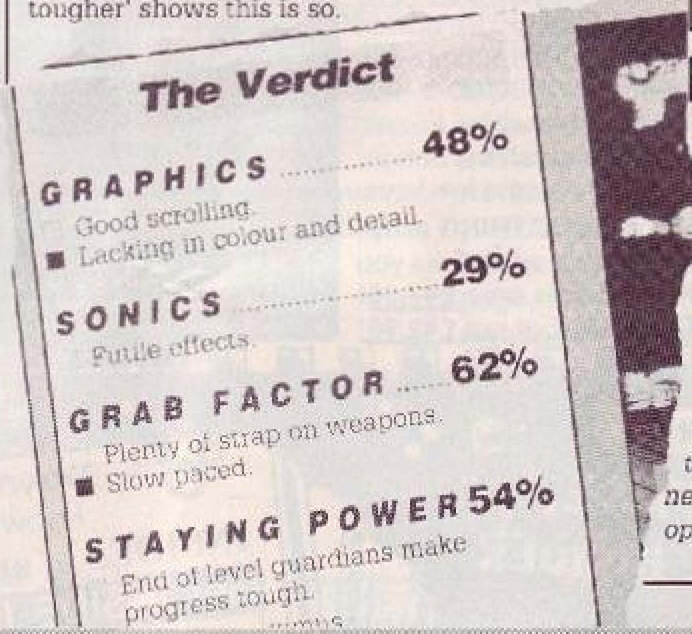
Congrats Domark! 'We never forget that it's the customers who put us where we are today', Joint Managing Director Dominic Wheatley told AA: 'and it's very kind of this lady to write in and say such nice things about us!'

But it is *our* type of game!

I disagree totally with GBH's review of R-Type! It may be his last ever issue – but he has no right to slag off a completely playable and enjoyable arcade conversion.

The graphics are more detailed than most games, since they are in mode one, even though they may be monochrome. The scrolling is adequate and smooth, and the speed of the ship is very good – if you get further into the game, the many sprites on screen do not slow down movement at all. What sound effects would you want? The explosions are well done and the visual effect of the explosions follows the arcade machine accurately.

Obviously the reason for the biased, prejudiced and poorly written review was that GBH didn't get far enough into the game. I mean, devoting 2 paragraphs to level one and vaguely referring to level 2 as 'things start getting tougher' shows this is so.



The Verdict

GRAPHICS 48%
Good scrolling.
■ Lacking in colour and detail.

SONICS 29%
Futile effects.

GRAB FACTOR 62%
Plenty of strap on weapons.
■ Slow paced.

STAYING POWER 54%
End of level guardians make progress tough.

Mike Wong's Verdict

GRAPHICS 89%
□ Good scrolling and detailed sprites.
□ Good explosions.

SONICS 51%
□ Beam sound good.

GRAB FACTOR .... xx%
□ Lots of weapons.
■ Lose weapons on death.

STAYING POWER 93%
□ Tough guardians.
□ Credit system keeps you at it.

MW RATING 91%

□ Brilliant arcade conversion.
■ Not enough levels.

● Mike Wong's verdict of *R-Type*. We gave it 51%

It is a good arcade conversion, I'd hate to think what it would have turned out like if it had been in chunky mode zero!

Mike Wong
Sale

Well Mike we mightn't agree with you, but we were so impressed with the way you argued your case we did something that to the best of our knowledge we've never done before and allowed a reader the opportunity to write his own Verdict.

Sugarman by SARKAR



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Tape-to-disk at the touch of a button. Ridiculous, you may say, but it works every time. *Multiface* can stop any program in its tracks and save the program from memory to either tape or disk. It's completely foolproof. Similar products have had problems with screen size, colour and even sound. *Multiface* can handle all these without a second thought.

That alone would have satisfied many people, but Romantic Robot has gone one step further, incorporating a memory editor. No program is safe with this: everything is out in the open, including the Z80 registers, CRTC data and any part of memory.

Don't be fooled into thinking this will result in mass piracy, however. The *Multiface* unit itself must be plugged into your Amstrad to allow reloading of a program it saved.

Multiface II must be the cleverest hardware device at present – a necessity for disk owners who thought they were stuck with loading from tape every time.

AMSTRAD ACTION

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WOULD YOU LIKE TO FLY?

While the editor's out of the office enjoying his usual lavish expenses paid ego trip, we, the *AA* team – the ones who actually do the work round here – thought we'd take the opportunity to tell you about this fabulous competition we've fixed up with those mega-guys at MICROPROSE to celebrate their brilliant *Airborne Ranger* (review on page 40). And since we know how much the old fool hates flying, we thought we'd send him too!

Do you want to be an *Airborne Ranger?* Do you want to live a life of danger? Then hang onto your hat, buster! Because you're going up, up and away with MICROPROSE!

The prize in our latest, greatest competition is a very special day out indeed at MICROPROSE HQ. Not only do you get past the security guards and into the heart of a great software organisation; not only do you get loads of goodies – games, posters and stuff; not only do you get to see top secret future projects and the programmers who are working on them... Not only do you get all this, but *you also get to fly with MICROPROSE!*

That's right. You and the editor – who's still recovering from a plane trip he took two years ago – will climb aboard their Piper Cherokee.

Of course, you *are* putting yourself in the hands of people who spend their time flying on the CPC, so you need to have a certain faith in their ability. After all, we can't be held responsible if the pilot starts screaming at 30,000 feet, *'Where's the Escape key? Where's the Escape key?'* But think of it this way: if you go, at least you're taking the editor with you. Every cloud has a silver lining.

Oops, I think I hear his leaden tread. Just answer the questions – you'll need to read the review on p. 40 first – and rush them off now on the back of an envelope or postcard to us here at: *Don't Tell The Editor, Amstrad Action*, 4 Queen St, Bath BA1 1EJ before 5th April 1989.

Whatever you do, though, *don't tell the editor!*... Er, Steve, your scrumptiousness, ha ha, yes I've written that page, sir. What? No, you don't want to see it, your deliciousness. That's right, probably very dull *as usual*... Just going for your usual post-lunch lie down, sir?

THE QUESTIONS

1) What does the Airborne Ranger wear? Is it:
a) a natty blue boiler suit;
b) long johns, an overcoat and wellingtons, *or;*
c) battledress?

2) How many first aid packs does he have? Is it:
a) none;
b) three, *or;*
c) four?

3) Waiting for the pilot to return is like waiting for:
a) Pat to write his pages;
b) Steve to fetch a coffee, *or;*
c) the 74 bus?

THE PRIZES

THE WINNER

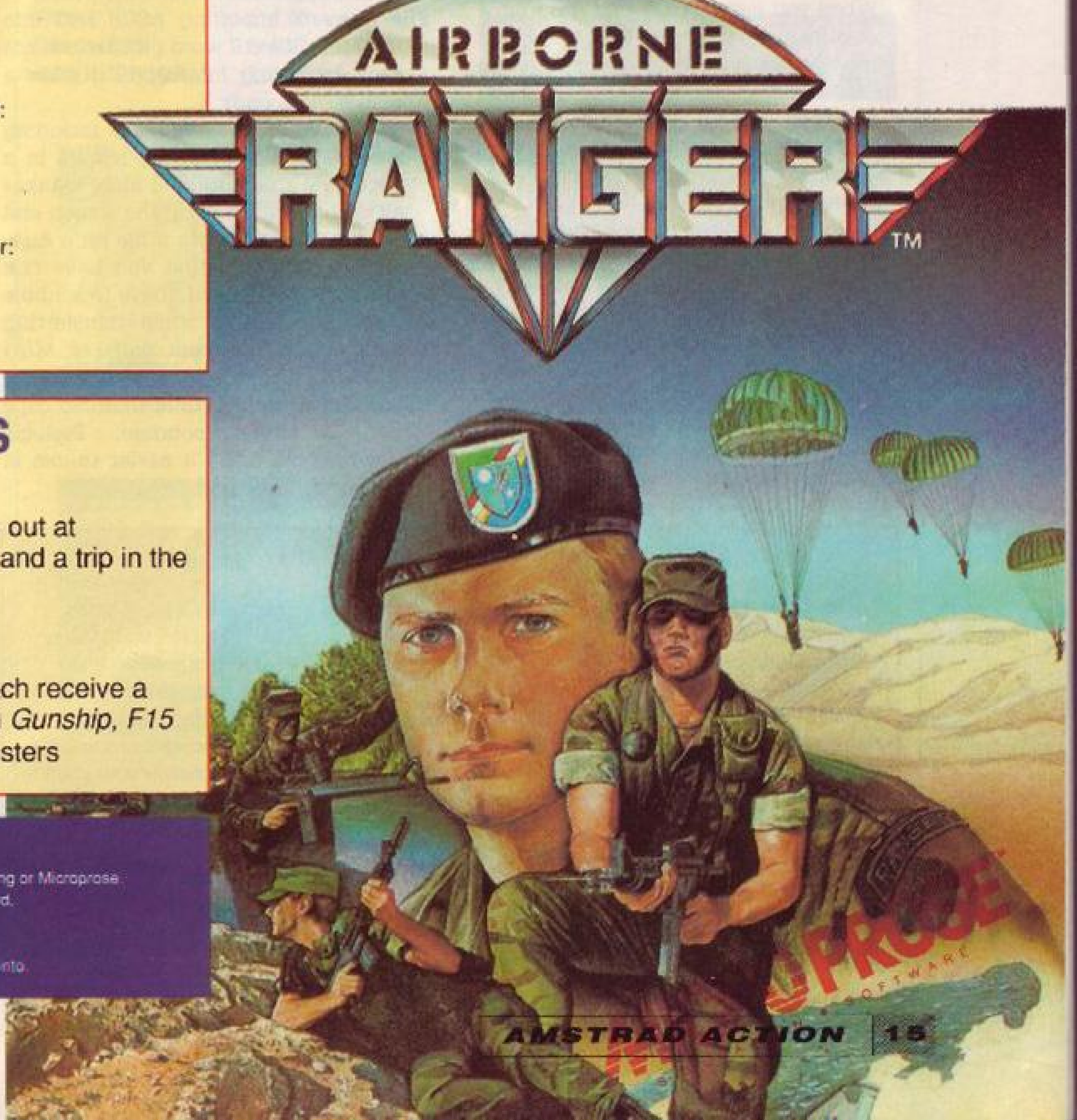
- will spend an all expenses paid day out at Microprose, with assorted goodies, and a trip in the new Microprose plane

THE LOSERS

- ten second place runners up will each receive a 'simulator trilogy' bundle comprising *Gunship, F15* and *Silent Service*, together with posters

The rules

1) This competition is not open to employees of Future Publishing or Microprose.
2) Entries, which shall be on the back of an envelope or postcard, must arrive by 5th April 1989.
3) Multiple entries not permitted.
4) Judge's decision is final; no correspondence can be entered into.



OH CAMEL, YE FAITHFUL!

Interceptor provides extra features for *Mini Office II*, adding greater user friendliness to an already popular system. Even more importantly, it suggests a new area for future CPC programming.

This *Mini Office II* turbocharger gets the PAT McDONALD treatment; while (right) STEVE CAREY talks to John Keneally, the man behind the company.

Sorry about the headline, by the way.

INTERCEPTOR

£14.99 128K disk only
Camel Micros ☎ 0392 421105
Wellpark, Wileys Avenue, Exeter EX2 211892

Using *Interceptor* is surprisingly trouble free. Simply RUN"DISC on the program, and when that's finished load up *Mini Office II* as normal. And that's it: now *Interceptor* can be invoked at any time simply by pressing the up and down cursor keys at the same time.

The screen which was displayed is saved into the extra memory, and a new menu is brought down:–



● The menu. Anything take your fancy?

Save Block This saves the current program module and all of its data onto a blank disk. So you could prepare a template for the database or wordprocessor, and save it using *Interceptor*. When you want to use that *pro form a* document, you simply load the saved module, rather than going through *Mini Office II*, going to the program and then loading the module. As you can see, using this function saves a lot of repetition. It does, however, consume large amounts of disk space – up to 95K in fact, so you are limited to a certain extent in the number of templates you can have. Disks – as we all know to our cost – are not cheap.

Disk Management Using this set of commands is much quicker than using *Mini Office II*. Possible options including copying disks and files. The standard of copying is pretty good, dealing with several games disks. You can also perform standard disk housekeeping – you know, catalogues, renaming files, erasing files and formatting disks, that kind of thing. Most of this is possible from inside *Mini Office II* anyway, but *Interceptor* performs faster, and with an edge in performance. There is also the ability to print ASCII files to the screen or printer.

File Convert Importing ASCII text into the *Mini Office II* word processor is not easy, but using *Interceptor* it takes a matter of seconds.

Screen Save/Print If you are including spreadsheet or database results in a document this option is idea. It takes all of the characters on the screen and puts them either into a file on a disk, or to a printer if that you have one attached. So you don't have to scribble down the results while transferring between the different parts of *Mini Office II*.

Calculator A handy utility that can cope with scientific notation. Perhaps Camel could make it easier to use in future versions?

Turn of speed

Interceptor is designed to work with *Mini Office II*, but it can be loaded in conjunction with *Protext* and *Tasword*, though not a 128K program.

The only function which doesn't work at all is the ability to take a snapshot of these programs and save it to disk.

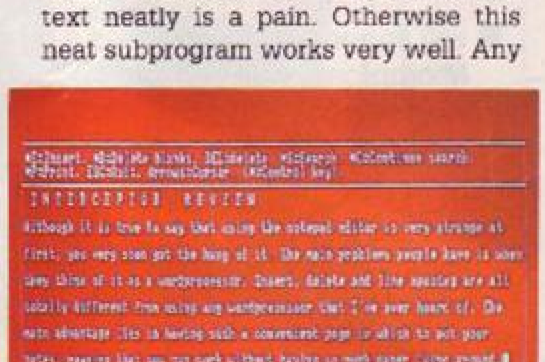
Most other features work well, although *Protext* is not as happy operating with *Interceptor* as is *Tasword*.

Mind you, given *Protext*'s excellent turn of speed the need for something like *Interceptor* isn't that great anyway.



● *MO II*, much enhanced by *Interceptor*

Notepad A replacement for the innumerable backs of envelopes and cigarette packets that generally accumulate near computers. There are 26 pages to write on, labelled A-Z. Editing these is confusing to begin with, because the RETURN/ENTER keys don't do a lot. Instead the cursor keys should be used for everything – so laying out text neatly is a pain. Otherwise this neat subprogram works very well. Any



● Notepad always at your fingertips

How to make a niche for yourself

The common view of the software industry is that of volume marketing, giant corporations producing copies of games in the hundreds of thousands, distributing them, and raking the cash in. To a large extent this is what happens, but ever since microcomputers were invented there have been plenty of companies that specialise in *niche marketing*.

You get an original, novel idea. Most likely the numbers to be sold won't interest a big company, or they would have done it first. Then you produce the product and sell it: which is exactly what John Keneally of Camel Micros has done with *Interceptor*.

Mail order selling is not easy, and one of the reasons why a lot of small operators fail is that they try to compete with the large companies. It's not easy selling a database, wordprocessor or assembler, no matter how good it is. The secret is in the rarity of the product, not the quality. If a small business can sell enough of an original product, then one day it may be a big business.

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King of Camel lot

STEVE CAREY talks to John Keneally

John Keneally's computing experience began with the TRS80, the old Tandy/Radio Shack monster, which had a very wide but short-screened display and was not world famous for either speed or reliability. From that to the Spectrum was a revelation – 'a nicely self-contained, dependable machine', he says.

The CPC was the first home computer that seemed to John to provide 'a bit of beef, something you could really get moving on', and indeed it did, for from it was born Camel Micros, one of the longest established CPC mail-order companies still solvent. (The Camel of the name, by the way, refers to the river in Cornwall – you may remember Camelford being in the news not so long ago as the result of water pollution.)

Camel gives Pilgrim hump

Camel has been going for four years now, but it's only in the past 18 months that they have been producing software for themselves and selling direct. The first project, for example, was the adventure creator *Genesis* for CRL. The Pilgrim, who reviewed it in the Adventuring section of *AA4*, was impressed with the fact that it enabled you to incorporate sound *and* split-screen graphics into your games, but thought the whole package a little short on documentation and friendliness.



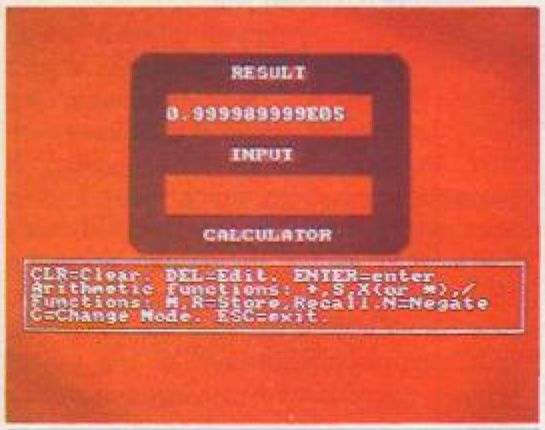
● John Keneally: 'the CPC was the first thing I'd seen with some real "beef"'

It was perhaps unlucky to be overshadowed by two other adventure creators that appeared at the time – Incentive's *Graphics Adventure Creator* and *The Quill*, the grand-daddy of them all. *Genesis* is still available (£9.95 tape; £22.95 for the considerably souped-up disk version), and Keneally claims to have received positive feedback from its users. But then he would, wouldn't he?

Camel's other ventures include *Grasp*, a graphics/graphing package (£12.50, disk) and *GM Chess*, a beginner's tutorial (£14.95, disk). Of the latter, Gary (RIP) decided its appeal was 'limited to chess buffs' (*AA38*, 63%) – which, all things considered, is not surprising!

Whither the CPC?

More recently there have been *WOPS* and *Interceptor*. This new venture is Camel's most interesting contribution to the continuing debate, 'Whither the CPC?' It suggests a new route for software producers to follow, offering add-ons and upgrades to existing and much used software. Keneally has other targets in mind for similar treatment, though not surprisingly he prefers not to name them. He is keen, meanwhile, to hear from *AA* readers with ideas for such ventures. ●



● The calculator – handy, but could be friendlier

changes are automatically saved to disk when you've finished with it, ready for future reference.

Everyday use

Interceptor is handy to have around. It doesn't go overboard in terms of power, but provides a lot of convenient shortcuts to people who use *Mini Office II* regularly. Using this program does make a genuine difference.

Interceptor saves on time, and anything which saves time must be good. People who use *Mini Office II* a lot – sales are currently claimed to exceed 10,000, and they're still climbing – can expect to find *Interceptor* a great help.

The only problem, beside the fact that it needs 128K to run, is the price. At £14.99 you're shelling out a very large proportion of the £19.95 cost of *Mini Office II* on disk.

If, like us, you use *MO II* regularly, though, the prospect of streamlining and making the most of it may well outweigh other considerations. ●

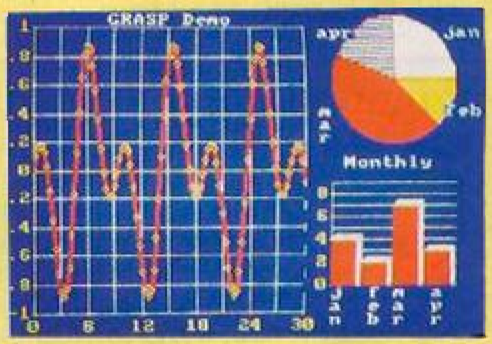
The Camel collection

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GENESIS	£9.95 (tape)
	£22.95
(much enhanced disk version)	
WOPS	£14.95
GM CHESS	£14.95
INTERCEPTOR	£14.95

● All programs on disk, *Genesis* excepted.
● A ROM version of WOPS is imminent.
● A money off coupon is included at the top of this page.

● The Camel range: below (clockwise), *Grasp*, *GM Chess*, *WOPS*, and a preview of *Poster Print*, an upcoming Camel product









GOOD NEWS	BAD NEWS
■ Great time saver.	■ 128K only.
■ Improves *Mini Office II*.	■ Calculator not over friendly.
■ Can be used with other programs.	

HOT TIPS

Get it taped with PAT McDONALD

Tape tips

Why won't the tape load? This problem affects all tape users from time to time but in most instances the tape can be persuaded to load by:

■ **Cleaning the heads**: with the PLAY key pressed, clean the business ends of both tape heads with a cotton bud soaked in ARKLONE-P, denatured alcohol or a propietary head cleaning fluid. Never methylated spirits, and never use a metal tool near the heads. Clean the pinch roller too – this is every bit as important as the heads, and dirt here will cause read errors. Don't forget the capstan either – this is the vertical metal pin which bears on the pinch-roller. From time to time it pays to demagnetize the record/playback head, preferably using a mains demagnetizer. Failing this a cleaning/demagnetizing tape is better than nothing.

■ **Azimuth adjustment**: if the tape still won't load, then it is likely that it was recorded on a machine with a different azimuth adjustment.

A tape head basically consists of two magnetic poles with a gap between them. If the gap isn't perpendicular to the direction of tape travel you may get problems: the difference between the gap and the perpendicular is called the Azimuth angle – it's from the Latin *semita*, meaning path: not many people know that!

If a magnetic pulse on the tape goes past a well-adjusted head, the electrical signal is clear to the computer and the program loads first time. If the head is maladjusted the signal is unclear, and may result in timing errors.

You need to hear the tape – for the 664 or 6128, just remove the EAR plug. 464 owners will need to turn the volume up fully and listen to their computer in a quiet room. With the offending tape running, insert a long screwdriver into the hole just behind the record/playback head.

Make it's engaged with the screw just behind the hole, and turn it, first clockwise and then anti. In one direction the sound will become muffled and in the other it will sound 'thin'.

The correct adjustment, for that particular tape, is a point where the sound is clearest without either of the two former faults. It's difficult to define, but with practice you can find it. Provided the tape itself is not damaged or sticking, and the heads are clean, it should now load without read errors.

It may well be that, after this treatment, tapes recorded on your machine will no longer load. This is unfortunate, but unavoidable – what you must do is readjust the azimuth to suit your own tapes.

■ **Bear in mind**: use good quality tape. Audio tapes are quite suitable, and it is not necessary to use tapes which describe themselves as 'for computer use'. I personally use the TDK D60 or AD60 types, but if these are too long for you use PC15. Whatever you select, make sure it's ferric – the frequency response of chrome tapes doesn't work that well for computers.

A cassette can sometimes stick due to uneven winding causing ridges on the supply spool which adhere and bind on the cassette casing. This can be alleviated by (a) banging the cassette end on a hard surface, or (b) forwarding and rewinding the tape a few times. Which you use depends on the time available to you.

Another ailment which may cause problems arises from the habit of leaving the play key depressed for a long period. In this condition, the capstan is pressing against the pinch roller, and in time will leave an impression of itself there which will cause regular 'jumps' in the frequency of the sound played back. It is also likely to damage the tape. The only cure is replacement of the pinch-roller – preventative measures are obvious!

The Amstrad tape system is well designed and reliably loads software at up to 5,000 bits per second, provided that everything is clean and properly adjusted. The system also has a remarkable tolerance of speed variations, and the system would have to be in a considerable state of neglect before it gives up and announces a read error.

J. M. Dunnett, Wellington

Thank you Mr Dunnett, and I hope that many readers benefit from this in depth look at improving tape loading. £20 is on its way to you even as we write.

£20, anyone?

The best contirbution to *Hot Tips* each month earns their author £20. So what are you waiting for? Address your work to: *Hot Tips, AA*, 4 Queen St, Bath, Avon, BA1 1EJ

Azimuth assistance

If Jim Dunnett's advice *(see above)* on tape head alignment still doesn't solve your problems, you may consider it worth while investing £8.95 in Interceptor's Azimuth Head Alignment Tape (☎ 07356 3711).



The tape has a standard baud rate loader, but what it claims as its special feature is a counter 0-1000 written at 2000 baud rate, continued on the alignment side of the tape.

The pack includes a screwdriver, and as a special bonus (and to test you've correctly adjusted your tape) the B-side features *Chopper Squad*, quite possibly the worst game ever released for the CPC: we gave it a paltry 34% in *AA1* – and that was three and a half years ago!

Cursor the slow people

Thanks to *Type Ins* for that great Pull Down Menus program in *AA38*. The cursor movement is too slow for most people. It's easily speeded up if lines 11130–11160 are modified with a multiplier in front of each `INKEY` expression. Example: `a=a+INKEY(1)` should be changed to `a=a+8*INKEY(1)` with the same multiplier throughout lines 11130–11160 to give an eightfold increase in speed. Choose other numbers if eight doesn't suit.

Arnold Carlson, Benfleet

Thanks Arnold. Other fast-fingered types will be grateful to you.

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If you want to use the Amstrad CPC to help run your business, the choice of software is limited. There's only one with a comprehensive range: SD Microsystems. PAT McDONALD vets their latest addition

THE STOCK ACCOUNTING SYSTEM

£39.95 128K disk only (upgrade available)
SD Micros ☎ 0462 675106
PO Box 24, Hitchin, Herts

While it's true to say that it's a while since Amstrad themselves used CPCs to calculate their huge profits, there are many, many small firms which have discovered that you don't need to spend £40,000 on computerising your accounts.

TSAS is an integrated stock control and invoicing system for the 6128. At present, it doesn't work well on an expanded 464: SD Micros are working on the problems, and should have them sorted by the time you read this. In addition a printer is vital.

It works something like this: you input your present stock, (regular) customers and suppliers, and every time you get an order, you enter the amount into the computer. This prints out an invoice and recalculates the stock levels.



● The way in

When you receive payment for an order you enter the amount, and the CPC flags the transaction as paid. It can produce statements at any time, indicating which payments are outstanding. Every so often (once a month makes sense) you can run an update, which removes all the completed transactions. So keeping track of who's paid how much for what and when is a good deal easier.

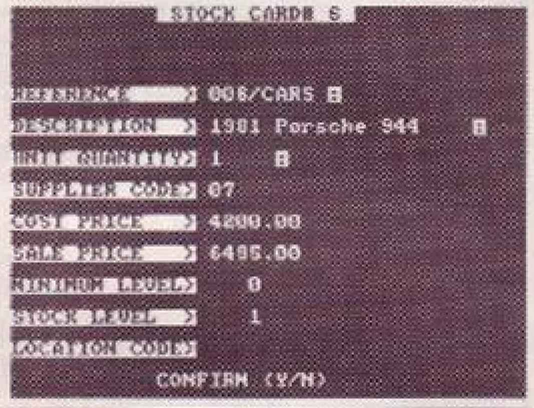
The biz

The first element of using the system lies in entering all relevant data into the program. From these the computer makes three files: the stock file, the customer file and the data file. The data file is the everyday working file, and when you've finished updating it it makes sense to merge it into the batch file, which is a conglomerate of outstanding orders and payments.

This batch file has to be processed every so often, depending on how much trade your company does. So a fast turnaround business might need to update every week, while a more regular, large volume order company could do with updating every month. The actual update runs in minutes rather than hours, and produces condensed trading figures for the month.

Using the program revolves around a central main menu, which takes you to the various parts. Taking these in the order that they're used (rather than the order on the menu) here is the stock control menu, plus some explanations:–

- **Add records**: the entry program for creating new stock items.
- **Change, delete item**: edits previous entries. Stock items are sorted by number only, which means that you must have a stock list at your side...
- **Find record**: ...Ah! Perhaps the stock list isn't so necessary after all. This scans the list for a close match with your entry, and then comes up with the stock number.



● Inputting your stock

- **List/update stock**: does a garbage collection on the incomplete and deleted items.
- **Print stock list**: speaks for itself.
- **Reorder list**: Every stock item has a minimum level – if stocks fall below this, an entry is made, and this option tells you which items need reordering.
- **Suppliers list**: adds to the list or prints it out.
- **Tape/Disk operations**: saves or loads a stock file, catalogues the disk or changes to a second drive if you have one.

They have a dream

SD Micros are wholehearted in their approach. You'd think that with the release of *TSAS* they might discontinue some of their older products that did some of the work which the newcomer covers independently.

Not a bit of it. 'Businesses have many different needs. We aim to supply those needs, not sell one individual program', says Steve Denson.

A term the firm likes to mention a lot is ABC. 'Alternative Business Computing' is their approach to helping people who don't want to buy an IBM PC for £1,000+ just to handle their invoices.

Instead, the customer buys – or already owns – a CPC and approaches SD Micros with their problems, which the company sets out to solve, often modifying programs to suit customer needs.

The personal touch is one of the key factors why SD are still around. Their *Stock Invoicer* and *Small Trader's Pack* were reviewed way back in *AA26* – you don't survive that long through mail order unless you're good and commercially viable.

The sales support they give, explaining to customers just how to use their new systems, lasts for 60 days after purchase. It can be extended by joining the Small Traders Club for a small annual fee.

And they offer substantial discounts to buyers of other SD products: anybody who bought the above programs can upgrade for £19.95.

If SD Micros can continue (in case you're wondering, they use their own products to run the business!) then the Amstrad CPC is set to become a small but measurable percentage of the business computer market.

Certainly, due to this enterprising company, the machine has the important factor: the software.

■ **Utilities**: print or update price lists from here, as well as convert files from the SD micros' *General Ledger* to *TSAS* form.

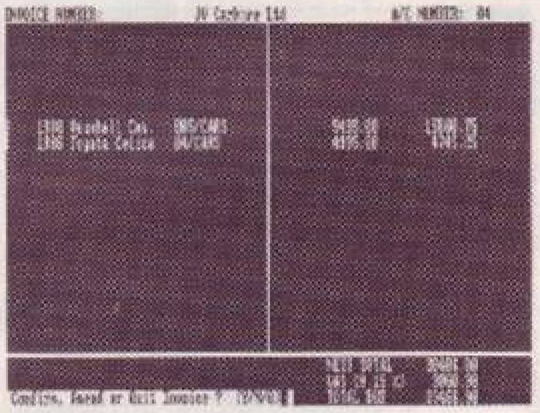
■ **Stock values**: want to know how much a single item costs, or how much your stock cost and is worth? Find out here.

■ **Exit program**: takes you back to the main menu.

Stock take in

The stock invoicing feature (where you enter the orders received) is slick and uncomplicated, with the number of menu options kept low. The depth that each option has, however (if you're willing to dig in), makes them comprehensive.

The various parts of this subprogram



● You've got the order

(those which are actually any different from the stock control menu) are:–

- ■ **Customer file**: updates are carried out from here.
- ■ **List journal**: gives a precis of just what orders have been received, and the ones which have been paid – in other words, the contents of the batch file.
- ■ **Raise invoice**: prints out a wonderful document giving details of the sale, a footer message (such as 'payment due within 30 days') etc. Sales can be on credit to customers with an account (numbered from 1 to 99), or cash (in which case they go to account number 00). Multiple copies can be printed.
- ■ **Utilities**: changes the header$ and redefines products.

The most satisfying part of *TSAS*, even if only for purely human reasons, is when you receive monies for services rendered. At this point you go to the sales ledger. This is the core part of the program, where all the mundane housekeeping tasks are resolved into financial fact.

- ■ **Add transactions**: receives payments into the package, allowing for partial cash or credit transfers. Sessions should be saved regularly into the batch file.
- ■ **Customer statement**: gets the real story about which of your customers have good records and which haven't.
- ■ **Financial totals**: gives the three important figures: total sales, receipts, balance.
- ■ **New period**: processes batch file, leaving totals and outstanding invoices. Of course, how often you use it is entirely up to you.
- ■ **Open/List accounts**: allows addition of new customers, numbered from 1 to 99. Account 0 is for cash transactions.
- ■ **Receivable accounts**: who hasn't been paying their debts?
- ■ **VAT summary**: gives VAT on all transactions, plus the total. Includes zero rated, full rated and exempt items. I daresay HM VAT office will really appreciate having such information presented to them.
- ■ **Analysis**: sales can be directed to 10 configurable areas – 1 could be mail order, 2 over the counter, 3 exports etc. This option gives a breakdown of sales by area, so that you can see where the money is being made.
- ■ **Statements**: although this is on a menu of its own, it could quite easily have been included in the sales ledger. It prints out statements for customers, so making it easier to remind them about outstanding payments. Rather than type out a large document on a wordprocessor, looking up the invoice numbers by hand, you could send a covering note plus a statement. Makes life a lot simpler.

Finishing off

The other two items on the main menu, calculator and disk utilities, aren't anything to write home about. The former has a distressing habit of crashing the program: SD Micros promise to get this problem sorted on future updates. The disk utilities perform simple tasks: catalogues, erasure of files, or the default drive to change.

Using *TSAS* compares favourably with more expensive programs running on more sophisticated computers *(biographical note: the Tech Ed worked in a number of computerised accounts departments before he got fired for fiddling – ed.)*. Each part of the program has a reassuring air about it that suggests SD have done their homework – so you do less of yours.

The manual, however, leaves a good



●And now the cash

deal to be desired. It describes features adequately, but no more. There's no index and not nearly enough examples. It lacks in quality too, having been printed on a rather naff dot matrix printer. The paper is bright red, which makes for difficult reading.

On the other hand, the program is user-friendly enough for you to dispense with the manual after a couple of days at most – I needed to read it just once. The fact remains that it isn't as helpful in the



● This guy hasn't paid! Send a reminder

learning process as it could or should have been.

SD Micros have come up with an excellent addition to their range of products. *TSAS* is a well designed product that should prove popular with small businesses who are big enough to need computerisation. I wonder what their next project will be... ●

GOOD NEWS

- ■ Comprehensive.
- ■ Easily learned.
- ■ Excellent back-up from SD Micros.

BAD NEWS

- ■ Manual should have been better.
- ■ Doesn't yet work too well on 464 with memory expansion.

Acid test

The acid test of any software – but particularly a program designed to help run a business – is how it performs over time. We've invited the owner of a retail business to give *The Stock Accounting System* an extended trial. Look out for the verdict in about three months' time!

AA SMALL ADS

FOR SALE

Amstrad CPC 6128, colour monitor, joystick and discs plus over £300 of games. £300 ono. Tel: 0622 687987 after 6pm.

Amstrad CPC6128, colour monitor, cassette player, £800+ of software, speech synth (Rom), 2 lightpens rom and tape. Mouse with Stop Press DTP. Worth new £1500, sell for £600 ono. Tel: 0584 3840.

CPC 6128, colour monitor, Rombo, Protext, Prospell and Maxam. 40 discs inc £300+ games. Accessories galore inc dust covers, lightpen, Amdrum, 50+ magazines. Perfect condition. Guaranteed 1990. £400. Tel: 031 225 1263 (any time).

Extra Sensory Perception "ESP" Unique genuine researched program with opening screen picture and on screen instructions, easy to use for testing your "ESP" in three parts, telepathy, clairvoyance and precognition. Can be used for serious application or family fun. Disc £9.95, tape £7.95. Send cheque/postal order to D J Software, 25 Dovedale, Stevenage, Herts. SG2 9EP. Phone (0438) 354908.

CPC 6128 colour monitor, Multiface 2, joystick, lots of software including Brunword, Atlast Plus, Dr Draw, Colossus Chess and Bridge, twenty discs. Worth a fortune, will sell for £350 ono. Tel: 061 338 7386.

Think and Solve. Mental maths for 6-9 year olds. Carefully structured problems giving useful practice in applying mathematical skills. By maths tutor. £4.99/tape. P Watts, 49 Archer Way, Swanley, Kent BR8 7XR.

Pace Nightingale modem and interface with rom software £60.00. Amdrive second disc drive with connector for CPC 464 £50.00. Phone 0323 36770 evenings.

CPC 464, colour monitor, Firmware specification, Hisoft Pascal, assembler, books, games. £250 ono. Owner upgrading. Tel: 01 691 0919 evenings and weekends.

Service manuals for CPC 464, CPC 664, CPC 6128, mono/colour monitors included £8.50 each. Amstrad magazines back issue. LSAE lists. Mr Small, 8 Cherry Tree Road, Chinnor, Oxon. OX9 4QY.

CPC 6128, colour monitor, over £500 software, discs include: - Elite, Ikari, Op-Wolf, Cpt Blood plus 4 compilations. Also many tapes. Worth £900, sell £400 ono. Mark Osborne, 77 Glebe Street, Castleford, West Yorkshire.

Small Traders! Our simplified range of CPC business software includes accounts, invoicing, stock/mailing etc. Recommended in reviews. SAE for catalogue. SD Microsystems (Dept AA), PO Box 24, Hitchin, Herts. Tel: 0462 675106.

CPC 6128 colour monitor, tape recorder, assembly language course, extension leads, dust cover, manual, various books, magazines plus tape and disk software £299 ono. Tel: (0223) 333306 Daytime or (0763) 246424 Evenings.

CPC 664: (converted to 6128 with 40025 rom), colour monitor + original rom, manuals & printer lead. Also games + utility software, rom-board + roms, digitiser, speech rom, 64K ram + other add-ons £1039 (whole lot). Will split. Tel: 01 954 6863 (after 5pm).

Business Simulator adventure game. Interactive characters over 70 locations. Excellent and humourous plot for beginners or experts £6. Cheques payable to David Donnelly, 47 Newstead Road, Kingstanding, Birmingham. Cassette only.

Behind the lines. Amazing graphic adventure, fun and puzzles for everyone. Cheap too, only £5.00 inc P&P. Send cheque, PO to Lee Martin, Impact, 27 Edward Road, Eastwood, Notts, NG16 3EU. Cassette.

Horses race predictor for any Amstrad. Out performs chance. Full instructions. Free updates. £4.50 tape £6.50 disk. Write for details to Andrew Mohan, 75 Pennine Road, Glossop, Derbyshire, SK13 9UL.

CPC 6128, modulator, DMP2160 printer, 8 blank discs, cassette, £270 worth of games, £200 of disc based utilities, £50 of books. Total cost £900. Sell for £600. Phone Dave (0603) 665388.

CPC 664 colour, Multiface 2, modem, Honeysoft, joystick, firmware, tapedeck, lightpen, books, 37 AA's, 75 disc games, RS232, tapes, autofire - Blackbox, £400. Richard 01 878 4104 after 6.30pm.

CPC 6128, colour monitor, £400 disc software (mostly games), tape leads, manuals etc. All in excellent condition. Will sell for £275. Phone 01 699 2946 after 6pm, weekdays.

Amstrad Action numbers 1-6 £2 each, 7-16 £1.50 each 17-37 £1 each. Send mag sized SAE to: Mr W Cooles, 17 Warwick Avenue, Egham, Surrey, TW20 8LW or phone Egham 34293 (all ex. condition.)

WANTED

AAs Nos 1-6, Nos 8-10, No. 15, No. 16, No. 18, No.19, No. 22 - No.32. Will pay up to £16. Would prefer appliers from North-West. Tel: Karl, Bolton (0204) 399198.

Rainbird Advanced Music System. Wanted for GCSE music studies for use on Amstrad CPC464 with 64K RAM and disk drive. Desperate! Please help. Phone Dave on Aylesbury (0296) 27085 after 6pm.

SERVICES

FREE (well almost!) SLIP-DISC. Tape-To-Disc Specialists state whether 464/6128. Send tapes, a disc & 70p per game compilations 50p per game (max. 6 games per disc). If you want tapes returned add 25p for each tape. We supply Amsoft CFC discs for £2.50. Send SAE for free transfer lists. If we can't disc-it we refund your money. What a nice man, a very, very nice man! Make cheque payable to: D R Hudson, 13 Cromwell Road, St Austell, Cornwall PL25 4PR. Tel: (0726) 65640.

Eprom service. Your programs (Basic, Basic/Binary, Binary) programmed into Eprom using RSX commands from £9.95. Write/phone for details telephone (0438) 354908. D J Software, 25 Dovedale, Stevenage, Herts, SG2 9EP.

CPC users! Join CPC software library now and get two games to keep free! Latest titles now available. £2 membership: CPC, 58 Hawkins Street, Hill Top, West Bromwich, B70 0QS.

CPC 6128 tape loading from £2 to £13. Send stamped SAE and £1 to: 23 Mariners Drive, Swanage, Dorset, BH19 2SJ. For what and where to buy locally. Compact! Simple! Terrific idea!

USER GROUPS

Swap Football Manager 2 tape for Game Over 2 tape/disc, also anybody who wants to correspond with new 6128 user is very welcome. Carl Surry, 37 Fairfield Way, Barnet, Herts, EN5 2BQ.

A.E.M. - Amstrad Enthusiasts Magazine - at last! a serious fanzine for serious CPC users. Send 90p and large A4 SAE to: N Selwyn, Highfield, Coombe Keynes, Near Wareham, Dorset, BH20 5PS

This section offers you the chance to speak direct to the huge world of CPC owners – or would be owners. Users report good results.

You can place an ad up of up to 30 words for just £5.

So you could use it to sell a printer, or launch a user group, or publicise a piece of software you've written.

One thing you can't advertise is the sale or swap of software. Such ads can be misused by pirates.

Fill in the application form and send it to us together with payment.

We'll place the ad in the next available issue (published 2-7 weeks after we receive your order).

ORDER FORM

SEND TO *AA* SMALL ADS, FUTURE PUBLISHING LTD, 4 QUEEN STREET, BATH BA1 1EJ

Please place the following advertisement in the next available issue of *Amstrad Action*

Name ______________________

Address ______________________

Telephone ______________________

I enclose payement of £5.00 by Cheque/ P.O/ Access/ Visa

Credit Card number ______________________

Credit Card expiry date ______________________

Classification. Tick box ☐ For sale ☐ Wanted ☐ Services ☐ User Groups ☐ Other

Write your advertisement here, one word per box. Include your name and phone number if you want them printed

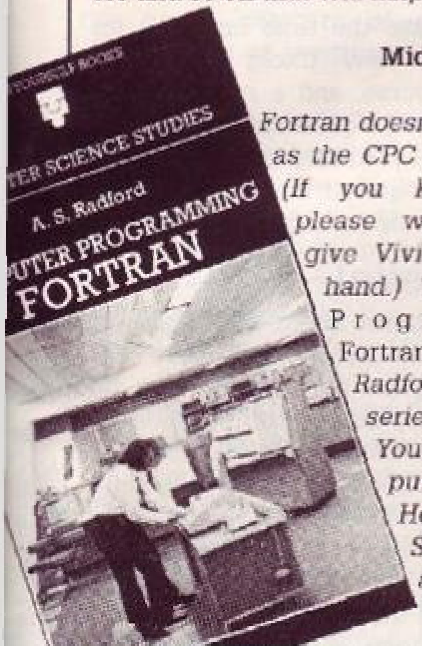
PROBLEM ATTIC

Here's the man with the plan: PAT McDONALD

Teach yourself

This summer I want to teach myself the computer language Fortran. I have a 464, disk drive and memory expansion. Do you know of any good manuals, compilers and so on that will help me?

Vivien Rutter,
Midsomer Norton



Fortran doesn't exist as far as the CPC is concerned. (If you know better, please write in, and give Vivien a helping hand.) Try Computer Programming/Fortran *by A S Radford, one of the series of* Teach Yourself Books *published by Hodder and Stoughton Ltd at £1.75.*

Backache

To help with erasing files on my CPC464 plus disk drive, I wrote this short program. Line 55 doesn't work too well: if I want to clear all the backup files by pressing 'B' or 'b', I get the error message `File B not found`. Why is this? Surely line 55 takes care of this?

```
10 REM *** File Eraser ***
20 MODE 2:INK 0,0:INK 1,15:BORDER 0
30 LOCATE 30,2:PRINT "FILE ERASER"
40 LOCATE 1,6:PRINT "Please insert disk, and press
   any key.":IF INKEY$="" THEN 40
50 CLS:CAT
55 a$=INKEY$:IF a$="B" OR a$="b" THEN a$="*.bak"
60 PRINT:INPUT "File to erase",a$
70 |ERA,@a$
80 CLS:CAT
90 LOCATE 1,20:INPUT "Another file? (Y/N):    "
   ,b$:IF b$="Y" OR b$="y" THEN INPUT "Same disk?
   (Y/N):    ",c$:IF c$="Y" OR c$="y" THEN 60 ELSE
   CLS:GOTO 40
100 CLS:END
```

Wm. A. C. C. Smith,
Windsor

The problem is that, although the filename is changed to `*.bak` in line 55, line 60 changes it back to `b`. So, delete line 55, and put this line in to do the same job:

```
65 IF a$="B" OR a$="b" THEN
   a$="*.bak"
```

Environmental damage

Having used *Pyradev* for some time for my machine code programs and finding that it has some shortcomings, I recently purchased *Maxam II*. I now have a more serious problem – namely how to access *Maxam II* source code from my 6128 Amstrad.

To be specific, suppose I want to create a window and colour it red. The source code is easy using Amstrad firmware routines and *Maxam II* assembles it OK. By default it's saved onto disk with a `.COM` filename suffix.

Maxam II, being CPM+, cannot use a filename suitable for a binary file and so I cannot use the normal Amstrad Amsdos call for a binary file. How can I load the assembled files and run them on the Amstrad, without using CPM+?

Any attempt to load the `.COM` file results in the error message **`Direct Command Found`.**

E. Marsland,
Southend on Sea

You sound confused. The assembled files are called object code, not source code. CPM+ object code will not run properly in Amsdos, and vice versa. They are two different operating systems, or environments, and machine code is stored differently on each: hence the error message. Programming machine code under CPM+ using Maxam II is totally different from programing under Amsdos.

So the short answer is, you can't. It would theoretically be possible to write a program to convert between the two formats, but even then programs ported over in such a manner would require extensive modification.

Stick to Pyradev *for Amsdos programming. That can produce object code in both CPM and Amsdos formats.*

For further information on assemblers, take a look at AA39, where we covered various languages.

Then, if you want to program under CPM+, a list of books on the subject was printed in AA35.

● Maxam II : source of confusion



Yellow peril

Mr Miller of Wilmslow spotted an error in last month's diagram on the **SCART to CPC connector**. Sorry to those who now have a yellow display: blue should go to pin **7**, *not* **17**. And **END** should read **GND**: that's where pin **17** should be connected to.

Special requests

Here's a few ideas for *TypeIns*. **Lorraine Jones of Ipswich** wants a screen dump routine that does graphics for her Brother HR5 printer. **Mrs R L Neal from Romsey** needs an LC10 colour screen dump, especially for printing *Advanced Art Studio* pictures. **John Hawkins from Stevenage** would like a program to turn off *Rodos* without resetting his machine. And **Dan Weaver** suggests a program to translate keys pressed into different alphabets.

Get 'em off!

Get your contributions off now to:
***Problem Attic, AA,* 4 Queen St, Bath BA1 1EJ**

HOW TO WRITE

So you want to be a games programmer. But do you know what you're taking on? What exactly is involved in writing a game? Where do you start?

We asked PHILIP OLIVER – half of the Oliver twins who wrote *Dizzy, BMX Simulator, Grand Prix Simulator* and a dozen others for budget specialists Code Masters – to tell us what life is like as a full-time writer of games.



● The Olivers. Philip is on the left. Or is it the right?

The first and most obvious question is: 'What style of game should we write?' Do we go for colourful flat sprites, 3D sprites (like arcade car racing games) or vector graphics (filled or unfilled)? We can rule out the last of these, as in our opinion they're boring – which is why arcade coin-ops never use them these days. That leaves the other two, and we've worked with both. 3D sprite games, however, lack depth, because most of the memory has been used for different sizes of similar sprites. (*See figure 1.*)

Background work

With all games, except perhaps flat sprite games, you need a background screen. You update all the sprites to their new positions, and then swap them to the foreground screen. There are two ways of doing this: you can either copy every byte out, which is slow; or redirect the screen points to the new section of memory. (You can often tell a game that's copying bytes, because it has large pretty borders to reduce the size of the area being copied.)

The good news about having a background screen is that you eliminate flickery sprites: the bad news is that it uses up a great deal of memory. We usually choose to accept some flicker as the price worth paying for having larger, more detailed games.



● *Figure 1.* This is how we did *3D Starfighter.* Obviously the more steps you use the smoother the flow of the game – but equally obviously more steps means more memory eaten up

Making history

For several months Code Masters were asking us to do a follow up to our most successful game, *Grand Prix Simulator,* which for several rather complicated reasons was reaching the end of its life. We felt we wanted to keep producing new and original games, but on the other hand it did seem that this was a particularly strong title and that producing a follow-up would be very rewarding – financially, if not artistically!



● *Grand Prix Simulator II.* The cover's so good, someone's bound to nick it

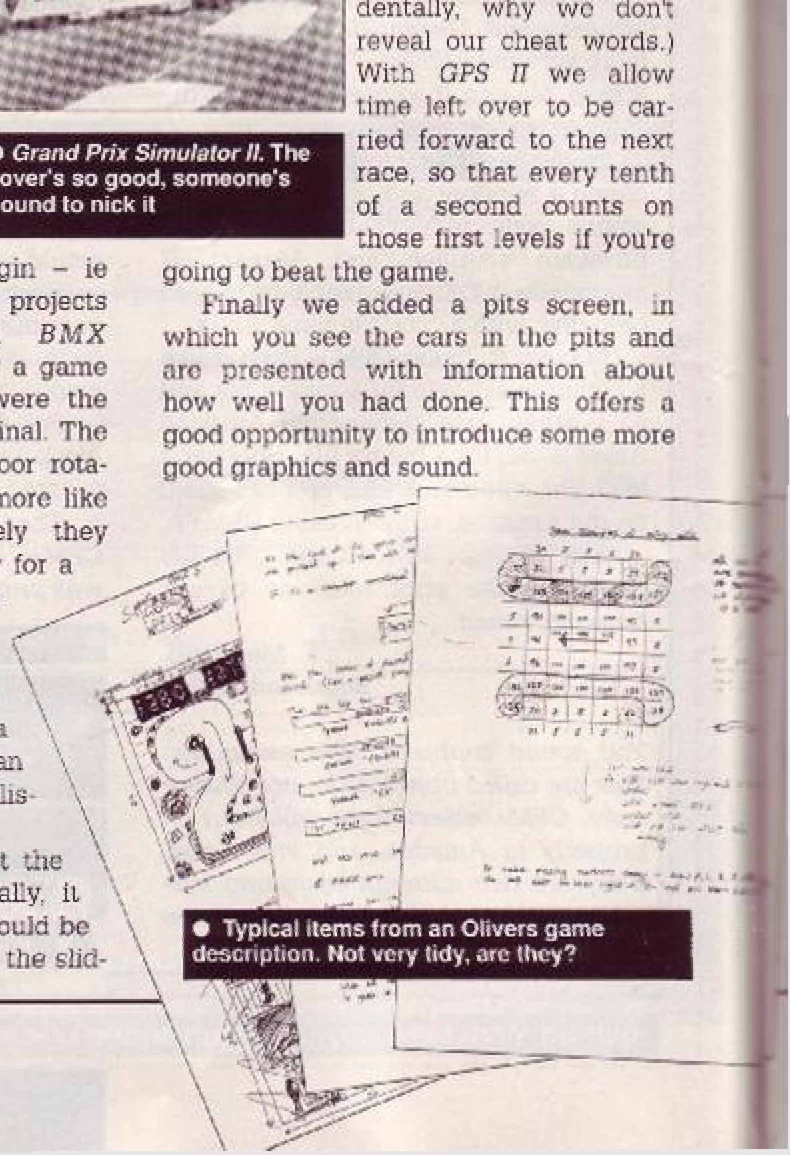
When we were free to begin – ie when we'd finished current projects *Treasure Island Dizzy* and *BMX Simulator II* – we put together a game plan, bearing in mind what were the good and bad points of the original. The main criticism had been the poor rotations of the cars (they looked more like cardboard boxes). Unfortunately they simply had to be small to allow for a decent track design, and the only way to get around it was to use a higher resolution mode – Mode 1. Now although this mode allows fewer colours a good artist like Neil Adamson can use shading to produce very realistic graphics.

The other criticism was that the game was too difficult (especially, it seemed, for reviewers!). This should be easy enough to improve: reduce the sliding and increase the time limit. As for improvements, new tracks would be essential of course, and a replay option like *BMX* seemed a good idea (quite easy to do by the way: during the game every key pressed is stored into a buffer and then read back for the replay).

On the level

An annoying point about many games, including *GPS,* is that you find you're constantly playing the same levels with no challenge simply so you can progress to higher levels. Unfortunately putting a select level option in is no alternative, since this gives the game a very short life – you just go through each level until you fluke it and when you've beaten all of them the game gets buried in your bottom drawer and is never looked at again. (This is the reason, incidentally, why we don't reveal our cheat words.) With *GPS II* we allow time left over to be carried forward to the next race, so that every tenth of a second counts on those first levels if you're going to beat the game.

Finally we added a pits screen, in which you see the cars in the pits and are presented with information about how well you had done. This offers a good opportunity to introduce some more good graphics and sound.



● Typical items from an Olivers game description. Not very tidy, are they?

A BEST SELLER

Once we'd decided what we were going to do it was time to write a game description.

The game description

It's vital before you start any project that you know what you want to do, and it's the same when you're writing a game. The description contains all the details of the game, sketches of the graphics, clever tricks of programming and exact rules.

It must also include a music description for David Whittaker, which outlines the tunes and sound required and lists where his code must go in memory so that it doesn't interfere with ours.

The description is then photocopied and sent to Code Masters. Neil (Adamson, the graphics artist), Richard and David Darling read through it and then add comments. In this case their only objection was the title: we wanted to call it *Super Grand Prix Simulator*, whereas they preferred *Grand Prix Simulator II*. This might seem a tiny detail to the person who is actually considering buying the game, but in fact getting the title exactly right is extremely important indeed.

Incidentally, you may be wondering why there are so many Code Masters *Simulators*. In the beginning there was *BMX Simulator*, which was a great game and sold well; as did *Snooker Simulator* which followed it. We had almost completed our car game which was the follow up to *BMX Simulator* when someone came up with the bright idea of calling it *Grand Prix Simulator*. When it became obvious that the *Simulator* title was a sign of quality, and that future titles featuring the word would do equally well, the other programmers jumped on the bandwagon (as did other publishers, I might add!).

The making of an editor

Before we could get going properly with *GPSII* we needed some graphics of sprites, including car rotations, text, pictures of cars and so on. These Neil drew using the excellent *OCP Art Studio*, delivering them as usual as a set of screen dumps *(see figures 2, 3)*.

The other important graphic work is doing the tracks themselves. These are constructed from a set of 256 cells and consist of 8x8 pixels. They're then placed on a 24x24 grid to give a detailed track. Doing it like this is very primitive, but as we found with *Jet Bike* we can get great results and it certainly makes programming shorter.

We wrote an editor for Neil, adapted from the one we did for *Jet Bike*. Several weeks later we received his work – excellent as ever. (While we were waiting we wrote *Fast Food*.) Then we had to begin the tricky and boring task of coding the game.



● *Figures 2 (top) and 3 (above).* Screen dumps of Neil Adamson's graphics of sprites for the cars and for the course layouts

The first part is to make the cars move. The controls we wanted give left, right, acceleration and brake, together with slope, friction and occasionally crash parameters, all of which are passed to a routine which calculates the new position of the car. This routine must be perfect if the game is to play correctly, and it requires some complex maths which takes up hundreds of lines of assembler. Because we were not using a background screen the car sprites had to be deleted and repositioned very quickly and timed with the raster scan to avoid flicker.

Eight days a week

This all took about a week to get right. Then came the task of programming the timing and scoring system, together with ways of displaying them. This took another week. (By the way, we both work full time, often until two in the morning, seven days a week. *(oh yeah? You told me you don't get up till 10.30 – ed.)*)

Then we put the title screen in with all the various options, and did huge amounts of play testing. While doing this we had to work out what was a reasonable time for each track. We also had to record and store our attempts – which would later be used as the computer paths you see when they race against you. What did prove impossible was to have them crashing, because this would require the cars to have the 'intelligence' to rejoin the race, requiring calculating power which is just out of the question with the processor speed of the Z80. (*BMX Simulator II* can do this, however, because the rider is knocked off and the bike remains in the same part of the recorded path, with delays in the playback to imitate a crash and then accelerate back up to speed.)

Debugger won't work!

Finally we added the music and play tested the game extensively. We found several bugs – such as displaying wrong scores, computer cars crashing off and becoming lost, and so on. Sorting these out is the most frustrating part of programming, and in this case it took a whole fortnight to iron everything out.

At this point we were able to give Code Masters a version which could be used to create a master for duplication. We then continued with the Spectrum version, which was particularly easy and took about a week.

From this point onwards, it's up to the staff at Code Masters to get the game packaged and into the shops. This requires screenshots, cover illustrations, wording (in several languages) and a whole heap of stuff besides. This all takes time – about six weeks on average – and if the game isn't in the shops by the time you read this, then it's stuck somewhere in the packaging, duplication or distribution chain.

As for our next project – it'll have to wait. We're off skiing! ●

In *Grand Prix Simulator II* there's about:

- **10,000 lines of assembler;**
- **three or four screens of very complex and accurate graphics, and finally,**
- **five minutes' worth of original music.**
- **In addition editors created to construct the courses, grab the sprites, sample speed and so on required a further 10,000 lines of assembler.**

WORDS WORK



With PAT McDONALD

Feeding time

In response to P.G. Richards' problem *(Wordswork AA,)* it is possible to perform form feeds between individual copies of the same letter on continuous stationery. After selecting the print option, respond Y to the 'Form Feed after Printing' option. This should feed through any remaining paper up to the 11" of the form, assuming dip-switch 2.1 of your printer is set to on. Otherwise it feeds up through 12".

If your document is likely to take up more than one sheet then also respond Y to the 'Form Feed at Page Break' option. This should prevent anything from being printed around the perforations even for the longest of letters, provided the number of lines per page is not set too high. I altered my page layout, via the 'Customize Program' option, so that I have 65 lines per page – the header and footer options all being set to zero.

I assume that the inverse U form feed character did not operate at times beacuse it was located after precisely 11" of paper had been sent through the printer. So the printer wasted a whole page when it appeared at the start of a new form.

Remember it is the printer that calculates how much paper has gone through it and therefore how much remains to be fed. The computer simply tells it when to feed up to the top of the next page, which, incidentally, does not have to mean the line immediately below the perforations.

To get round problems caused by what the printer remembers, I have defined an extra printer control into my *Tasword* program, by setting inverse Q to initialise the printer using the code 27 64.

I have also now got into the habit of using this at the start of all my documents and besides solving problems with form feeding it also stops me printing a document in Elite when I want Pica (assuming I had previously set the printer to Elite). The same effect can be produced by switching the printer off then on before each batch of printing.

B. Holmes, Birmingham

No prints – charming!

I own a CPC464 and a Panasonic KX-P1081 printer, and though I am very satisfied with the printer, I have two problems with it at present.

The first is that when I use the printer in conjunction with my Electric Studio Light Pen (the MKII version) it won't print out anything at all. I have followed the instructions in the manual but to no avail. The printer works fine with Rembrandt. Is there any way to get round this problem, or are they simply incompatible?

The second problem is when I attempt to get IBM graphics. Would I need an eight bit printer port to obtain these? If so, which is the best and how much does it cost?

Martin Ridings, Manchester

With regard to your first problem, Martin: no, they shouldn't be incompatible – if your printer is set to Epson FX standards, it should work. Contact those lovely charming folks at Electric Studio on ☎ 0462 420222 to sort the problem out.

As for IBM graphics, it might be an idea to buy a printer that can print them first. ***Then*** *get an eight bit printer port from KDS (☎04853 2076) for £19.95...*

Catch the special

This column is *your* opportunity to air *your* problems – or even better, solve other people's! Write – or print out – now to *Wordswork, Amstrad Action*, 4 Queen St, Bath BA1 1EJ.

In particular, we're preparing *Wordswork Specials* on mailmerging and file compatibility between WP's. If you've an especially knotty problem, or if you've found ways to accomplish mailmerging or WP compatibility, or to accomplish either faster, let us know. The best contribution to each wins a crisp (salt'n'vinegar flavoured, since you ask) tenner. Address your remarks to *Wordswork Mailmerging* or *Wordswork WP* at the above address.

And if there's a subject you'd like to see in a *Wordswork Special*, let us know!



● Electric Studio's *Light Pen* – won't print?

That old smudged black magic

I am using an Amstrad DMP2000 printer linked to a 464 computer. I use *Amsword* (*Tasword 464*) for my documents, and I'm perfectly happy except for one thing: I can't maintain NLQ printing without frequently changing the ribbon and its attachments. At £5 a time this is costly. When I need to print a lot of copies, the situation becomes intolerable.

If the inkpad could be replaced or re-inked then the ribbon could continue until it was worn out. It's easy to get to the inkpad, and I would welcome any thoughts and suggestions.

V F L Grevitt, Chessington

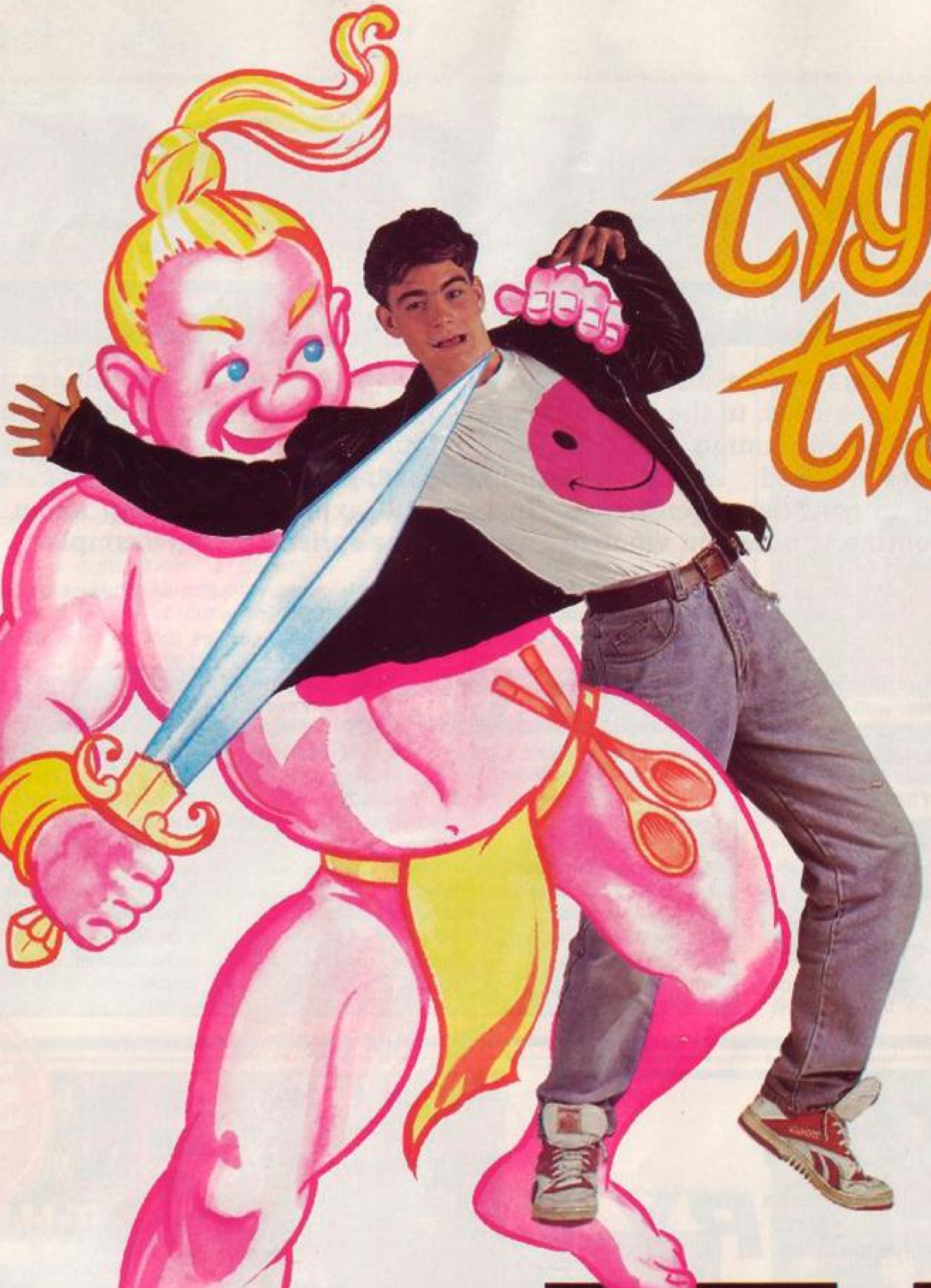
There are two schools of thought on this. One says that stationer's ink is acceptable, and produces darker print minutes after application. Or if you prefer then WD40 simply rejuvenates the old ink.

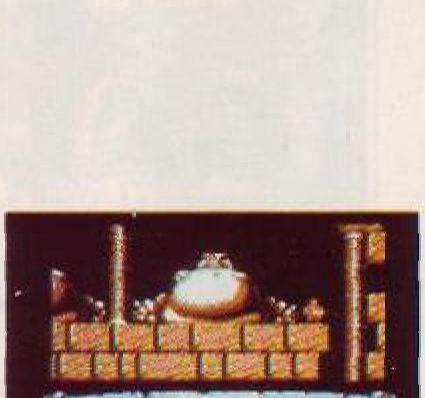
On the other side of the argument are those people who point out that printer ink contains lubricants that keep the printer head cool. Normal ink does not contain these lubricants, and so using it is decidely dodgy. WD40, while it keeps the head cool, adds no more ink to the ribbon. So your print must fade away eventually.

We had a call a while back from an intrepid inventor who was trying to combine the two. We haven't heard from him in months, so presumably there's more to it than meets the eye. (Hope the two don't combine tcombustibly!)

Use neat WD40. This at least extends the ribbon's life.

tyger! tyger!





Commodore 64 screen shots

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THE LOOK

Tales of CPC graphics, graphically illustrated by PAT McDONALD

Let's turn aside, away from the direct problems of printing sprites, to the logistical difficulties in programming and the way sprite routines are used.

The first thing to consider when developing a sprite routine is how you want to use it. I *could* just write a listing, print a couple of hundred address and control points, and say 'get on with it'. It's not going to happen *(dead right it ain't – ed.)*. Instead, I'll explain everything about the usage of the sprites, giving examples.

The kind of person we're aiming at is the Basic or starter machine coder who has a certain understanding of programming but who hasn't used sprites before. Rather than relying on CALLs and POKEs, we'll be using RSXs (resident system extensions) which can be used easily from Basic and machine code.

People who prefer 'the hard stuff' of raw machine code will be given explanations and space, but they should really be able to cope with writing their own routines anyway. So I'll not be unleashing pages of pure assembly language.

Whacking great sprites

Everybody likes games that use large sprites, because they look better. Larger sprites, however, take longer to print than smaller ones, so you can't have as many on the screen. They also take up more storage memory – which again means fewer available sprites.

It would be possible to go for 'global'

A word to the wise

The routines will be incorporated under a fast ticker interrupt set to trigger at every fifth interrupt after frame flyback (see *AA41*). This feeds the sprite printing routine, which does the business if required.

If nothing needs to be done, then it returns straight away.

The area of the screen is copied twice, with the sprite being overlaid over the working copy prior to printing.

When the sprite has moved beyond the confines of the background cut, the information is scrolled and the newly revealed area read in.

A standard two byte data structure is used for the X and Y positions, remaining compatible with the Amsdos graphic kernel calls.

One bit is used for each of two flags, one to indicate a sprite is in use and another that it's waiting to be printed.

THE GALLERY



These gallery entries look pretty good, eh? If you think you can do as well, don't hide your light under a bushel. Let us have them at the *AA* office, and you could win £20! Send entries on disk or tape (together with a short note telling us which art package you used, and an SAE if you want the pictures back) to: *The Look, Amstrad Action,* Future Publishing, 4 Queen St, Bath, BA1 1EJ.

£20



● David Tierrey from Hamilton wins £20 for a superb collection



● Football Crazy: that's a good description of David Knight, who lives in Birmingham

size, where sprites can be as big or as small as necessary. This has snags, though, in that it takes slightly longer for the program to execute – it has to work out a routine suitable for the size of sprite. And the program would be longer.

The best route, like it or not, is to use small sprites. If a big sprite is needed, it can be acheived simply by adding smaller sprites together. (You can't go the other way and split larger sprites into smaller ones.) They also take less time to print, which means programs using them run faster. Four sprites printed at once is a reasonable number, bearing in mind that there won't be much if any flicker.

(By the way, by small I mean around 16 X 32 pixels in mode 0 – the same size as 32 X 32 in mode 1 or 64 X 32 pixels for mode 2. Large would be anything taking up a sizeable fraction of the screen, from about 1/10 and up.)

The background will not be of the dreaded XOR type (the sort that produces horrendous colour clashes). Instead the background will be copied into memory, allowing the sprites to glide in front of it in a natural manner.

Thoroughly mode in

On the subject of colours available, there's not much to say. Some sprite packages rely on just one or two screen modes being supported. The *AA* sprites will be fine in any mode, any colour, with one proviso: ink number 0 will be the paper or background colour.

The reason for that when working out where a sprite begins and ends, it's useful to have some term of reference. A blank surround is the easiest way to do this, and it generally helps to represent a blank with zero. Is anybody amazed? I suppose not.

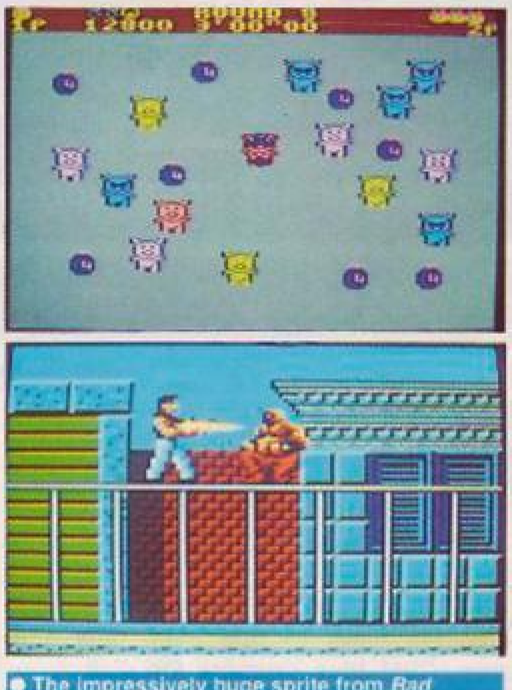
The Look: of things to come

Over the next few months the sprite routines will amount to a demonstration game listing. But what then? Quite a few people have expressed an interest in *The Look*, and it would be wrong to think that that will be as far as it goes. We are here to serve, your wish is our command, we're just glad to be of service *(oh get on with it McD. – ed.)*.

For instance, some readers have expressed an interest in learning about vector 3D graphics – remember *Starglider*, *Elite* and such like? Then there's the subject of drawing on the CPC, from messing about with *Smart II* (Robert Buckley's art program on the *AA37* cover tape) to using a CAD package or PCB design.

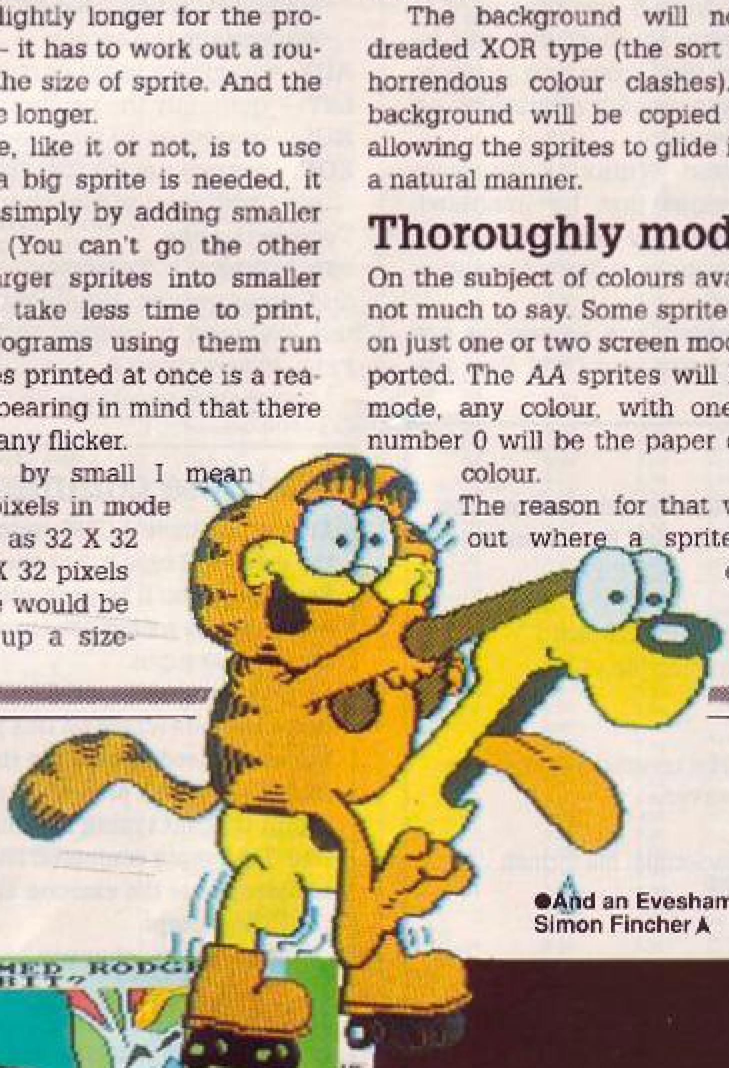
And what about game design? There are professional programmers only too willing to contribute ideas and knowledge on the subject.

The Look is here to stay for a long time!



● The impressively huge sprite from *Bad Dudes*, together with the smaller, porcine efforts of *Psycho Pigs UXB*

● Next month there will be a program to let you edit and design sprites, together with hints and tips on design and programming



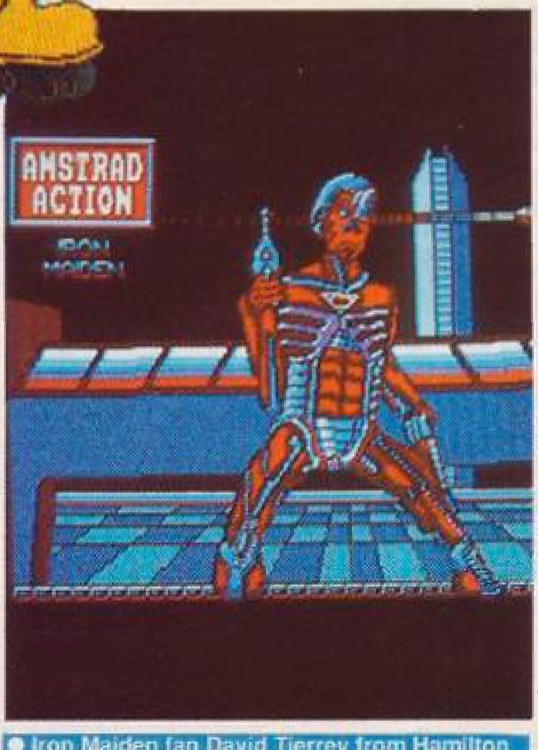
●And an Evesham Garfield from Simon Fincher ▲



● James Garside of Rhyl has framed not only Roger Rabbit, but Bob Hoskins too



● Makis Keramidas of Thessaloniki was just a bit slow in sending in this seasonal entry



● Iron Maiden fan David Tierrey from Hamilton is responsible for this



● Evesham regular Simon Fincher with yet another picture of Batman



● I doubt if Greece is really this bright, but Makis Keramidas thinks so

●Makis with a new AA logo ▼

BAR CPM

First Steps *part seven with RICHARD MONTEIRO*

We're taking the PIP for the second and final time!

Before we get stuck into **PIP**'s ability to communicate with auxiliary devices, its multiple command mode, and the parameters that can follow it, here's a quick recap of **PIP** at its simplest.

Assuming you have two drives – 3.1 users are lucky in that need only one drive; CPM Plus prompts for disk A or disk B when there's only one drive – you could type `PIP B:=A:FILENAME`. That would copy the file FILENAME from drive A to drive B. Something like `PIP B:NEWFILE=A:OLDFILE` copies OLDFILE from drive A to drive B and rename it to NEWFILE en route. In short, **PIP** can be used to transfer files from one place to another and make certain alterations on the journey. Onward!

PIP's command syntax is far more complex that might first be imagined. Along with the drive or device specifiers and filename a whole string of parameters can be added.

These parameters are known as **PIP** options. CPM 2.2 **PIP** and CPM Plus **PIP** share many options: PIP Plus, however, offers many more.

PIP off

Options are usually enclosed in square brackets and placed after the second filename. For instance, `PIP CON:=FILENAME[D15]`. The options available for both 2.2 and Plus users are shown..

A①	Backup only the files that haven't been modified since the previous backup.
B≠	Loads individual blocks of data before saving it to the destination file.
C①	Prompt for confirmation before performing each copy.
Dn	Delete any character past column n.
E①	Echo transfer at console. Source data displayed on screen as it travels to destination.
F	Filter form feeds (Ascii 12) from the destination file as it is saved.
Gn①	Get source from or go to User number n. Range 0 to 15.
H	Hex data transfer. Data is checked to be in proper Intel hexadecimal file format.
I	Ignore :00 records in the transfer of Intel hex file format. Forget H and I options: you won't use them.
L	Converts all upper case characters to lower case.
N	Line numbers added to each line of the destination file. If N2 is used then a leading zero is added to the line number and a tab is inserted after the number.
O	Assumes the file being transferred is machine code file and ignores Ctrl-Z characters.
Pn	Inserts a form feed character after each page of the destination file.
Qs	Transfers the source file until the search string is read (the string itself will be transferred). The string must be terminated with Ctrl-Z.
R	Reads system files. Those normally hidden to CPM.
Ss	Transfers the source file from the point where the search string is read (the string will be transferred). Using options Q and S together it is possible to extract and transfer a section of the source file.
Tn	Expands tabs. When the tab character is read in the source file, the appropriate number of spaces are substituted so that the next character in the file is positioned at a point in the current line which is divisible by n.
U	Converts all lower case characters to upper case.
V	Verifies that data has been copied correctly.
W	Writes the destination file over an exiting file with same name.
X≠	Copies files that don't consist of strings of Ascii characters.
Z	Parity bit is set to zero.

① CPM 2.2 only.
≠ CPM Plus

Clever PIP

Clever **PIP**; it lets you copy a file from disk to device, from device to disk or from one device to another. The files must contain printable (Ascii) characters. A colon follows each logical device name so it can't be confused with a filename. The syntax is:

`PIP destination:filespec = source:filespec.`

Options, detailed elsewhere, can be used as normal. The logical device names follow:

- **CON**: – console input or output device. When used as a source it is usually the keyboard; when used as a destination, it is usually the screen.
- **AUX**: – auxiliary input or output device.
- **LST**: – generally the printer.
- **NUL**: – produces 40 hexadecimal zeros.
- **EOF**: – source device that produces a single Ctrl-Z (end of file) character.

Type in the line

`PIP A:DUMFILE.TXT=CON:`

and press return. Whatever you type at the keyboard is written to the file `DUMFILE.TXT` on drive A.

To end the frivolity press `Ctrl-Z`. ●

Multiple command

Ensure you have a CPM system disk in the drive and type PIP at the A> prompt. Eventually you'll be presented with an asterisk; this means PIP is ready to accept your input.

You can type any valid PIP operation described elsewhere on this page – but there's no need to type PIP itself. Exit from the asterisk prompt by pressing return without typing anything else on a line. The empty command line tells PIP to discontinue the exercise and return to the CPM prompt.

Following is what you might do:

```
A>PIP
CP/M Plus PIP VERSION 3.0
*newfile.COM=oldfile.COM
*A:=B:filename
*B:=*.*
*<RETURN>
A>
```

When you type PIP followed by return it loads into memory and stays resident.

The advantage of executing a sequence of commands like the above becomes immediately obvious: the time taken to carry out each action is greatly reduced.

That's PIP done to death. Next month we tackle ED *(did someone call? – ed.) (no you old fool, the CPM text editor – Monteiro)*

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FIRST BYTES

Assemble here series with RICHARD MONTEIRO

True 16-bit registers revealed; and the stack and program counter – how to use them and when to leave them alone

All the registers you've come into contact with so far have been 8-bit. Oh, all right, you have used 16-bit registers – but they are phonies: simply two 8-bit registers back to back. This month it's nothing but the genuine thing. 16-bit registers guaranteed.

The stack pointer is the first of the true 16-bit registers (none of this register pair nonsense). It is designed to act as an address pointer for accessing an area of memory known as the stack. It's not normally used as a general purpose register – and, indeed, using it as such would cause havoc. The stack acts as Last In First Out (LIFO) column of memory locations. The stack is analogous to a pile of plates: the topmost plate, or the last placed on the pile, is the first to be removed at a later date. Any of the register pairs can be stored on the stack using a PUSH instruction. Similarly any value can be reclaimed by POP.

Although the position of the stack in memory is not fixed by hardware, the CPC firmware routines initialise the stack pointer below the screen ram (&BFFF). Ant attempt to alter its position could prove hazardous. There is no need to alter the stack pointer each time you wish to use it, as the pointer is moved automatically when PUSH and POP are used. Around 256 bytes of memory are reserved by the CPC for stack growth – in practise not even half of this will be used.

What use?

Treat the stack as a temporary dumping ground. Situations often arise where a register, already containing important information, is required for other purposes. Rather than storing the register contents in memory somewhere – and wasting space and time doing it – the register data can be plonked onto the stack. PUSH does the job. When the data is required later, POP can be employed. The stack pointer is automatically decremented with each PUSH – ie, it grows down in memory – and incremented with each POP.

Try this short experiment:

```
ORG &8000
LD A,33      ;load A with 33
PUSH AF      ;save AF pair to stack
DEC A        ;decrement contents of A
POP AF       ;retrieve AF from stack
CALL &BB5A   ;print Ascii char in A
RET          ;return
```

The value 33 is placed in the A register before both A and F registers contents are saved to the stack with PUSH AF. Single register PUSHing isn't possible; PUSH A, for instance, doesn't exist. Register values aren't altered when they are PUSHed to the stack. The next instruction, DEC A, reduces the value held in A by one. The new value in A is 32. POP AF takes whatever is on the stack and places it in A and F. The number 33 should be back in A. This is proved by the next instruction – CALL &BB5A – which prints the Ascii character according to the value held in A. Ascii 33 is an exclamation mark (!); Ascii 32 is a space. If our PUSHing and POPing worked, and there's no reason for it not to, an exclamation mark will appear on screen. Don't forget to issue CALL &8000 from Basic once you have assembled the routine.

By now you should have got to grips with *MAA* – particularly if you have been following the last three or four instalments – so only Maxam-compatible listings will be printed.

The program counter

Your CPC is sequence controlled. That means all instructions are executed automatically, one after the other, in strict address sequence. There are some exceptions – jumps and interrupts to name two – but don't worry about them just yet. The 16-bit register responsible for maintaining this sequence is called the program counter (PC). This register always contains the address of the next instruction byte to be executed. ●

Things start to hot up next month when we introduce the flap register and conditional jumps

You can't do that!

Be very careful when using PUSH and POP: it is easy to PUSH and forget to POP later. Your program might still work, but you won't be returned to BASIC. If there's a value on the stack and the machine encounters a RET, the machine will jump to the memory location held on the stack and proceed to execute whatever is there. Nine times out of ten the bytes it finds will be nonsense. The result: a crash. There are times when PUSHing without POPing is useful, but you'll learn about that later.

Just because you PUSH BC doesn't mean you must POP BC. You could PUSH BC and POP DE, or PUSH AF and POP HL, or PUSH IX and POP IY. There could be many reasons for wanting to do this, the most common being lack of 16-bit register-swapping instructions. For example, there is no LD BC,DE or LD AF,HL. So the only logical thing to do is PUSH one register pair and POP into another.

HACKERS ONLY

Basic's variable pointer (@) has all sorts of applications. When used with strings things can become very interesting. With strings the variable pointer doesn't return the string address itself, but something called the string descriptor. The descriptor is three bytes long: byte 0 is the string length (0 to 255 characters), byte 1 and byte 2 contain the address of the string.

```
10 a$="This is a string"
20 descriptor=@a$
30 slength=PEEK(descriptor)
40 saddr=PEEK(descriptor+1)+256*PEEK(descriptor+2)
50 FOR t=saddr TO saddr+slenght-1
60 PRINT CHR$(PEEK(t));:NEXT t
```

Now that you know how strings are stored you can have fun. How about placing a machine code program where the string sits in memory? All you have to do is CALL the routine using the variable pointer (CALL @a$, say). That will really confuse people. There are restrictions of course: the code can't be larger than 255 bytes and it must be relocatable.

Unbeatable value

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DAY IN THE LIFE

The things CPC users do!

Stephen Palmer runs 'Computer Run' in Abingdon, retailing computer hardware and software, and offering consultancy for both home and business first time computer users. He uses a CPC 6128 and a DMP 2000 printer.

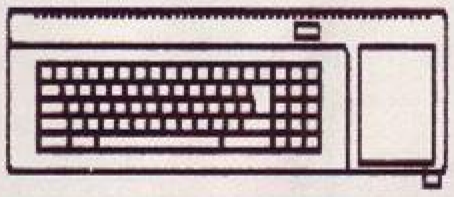
My first dabble with computers was with a TI99A back in the early '80's. I wrote a couple of games which were published, and this gave me the encouragement to buy a better computer later on: my Amstrad. I soon found out my games writing was not up to scratch, so I began to wonder what else I could do to turn a few pounds my way. Retailing was the answer, and Computer Run was born. When I had the idea of starting up my own business, I toyed with the idea of buying a more powerful computer, but found I could not justify the expense, as the 6128 could do everything I wanted. I just added a printer and some business software and carried on with my 6128.



● Steve Palmer: 'The CPC can easily maintain a small business... for most people, an investment of thousands of pounds is just not necessary'

Mouse in the house

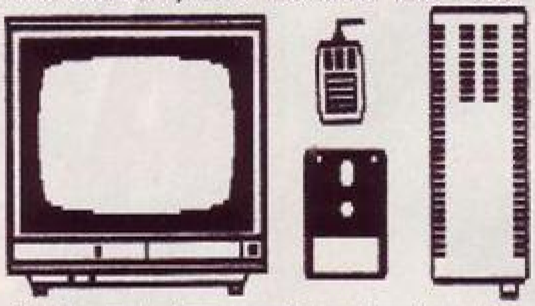
The first piece of software I required was a word processor. I chose *Tasword 6128*, later on adding *Tasspell* and *Tasprint*. This suite of programs is perfectly adequate for my use, and I particularly like the on screen help at the touch of the 'ESC' key. A database is the next obvious need of most businesses, for the essential stock control system. After looking at what was available and playing with *Mini Office's* database (far too small for my needs), I decided on *Atlast*. It's very flexible and large, only limited by disk space rather than by the memory of the computer. The third piece of software that I use, and the one which is most fun, is *AMX Stop Press*, an extremely good and well thought out piece of software that has ever been my pleasure to use and sell. With the mouse you can knock out an idea for an advertisement, flysheet, newsletter etc. in no time.



● A selection of Steve's advertising and promotional material – all done on CPC, naturally, using *AMX Stop Press*

Bull baffles brains

From the same stable that brought us *Mini Office II*, is *Plan It*. It has three parts: home accounts, card index and financial diary. It is the latter that I use.



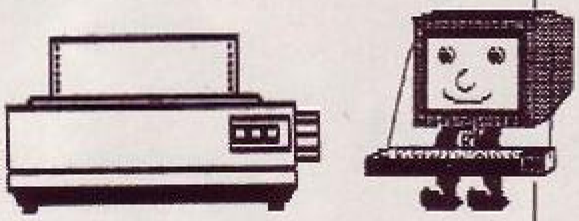
At the end of my working day, I use the financial diary to list the sales, and at the end of the month I take a print-out which gives me a breakdown of what types of products are selling best. Finally the last piece of bought-in software that I use is *Mini Office II*. As I said earlier, the database is too small for my requirements and for word processing I use *Tasword*, but I do use the graphics part of the package. The odd graph in a bank loan application does wonders for one's credibility (bull baffles brains, they say).

My first job of the day is to go out and deliver 100 or so leaflets through unsuspecting house owners' letterboxes. This is one area that *AMX Stop Press* is so useful in – not of course the delivering (!), but the design and layout of the leaflet. I can produce an A4 size leaflet combining the art work supplied and some of my own. I can honestly say I don't know what I'd have done without it. Of course you cannot print out hundreds of copies direct, so I take the finished product to the local printer, who needs only to touch up the art work before printing. My logo was designed on *Stop Press*, as was all the business forms I use such as compliment slips, letterheads, invoices and statements. I have also designed a letter head and logo for a business aquaintance.

The next job is to load *Database Planit* and check the financial diary to see what appointments I have for the day ahead. Then it's back to *Stop Press*, to print out invoices, compliment slips and letterheads for the day ahead.

The old-fashioned way

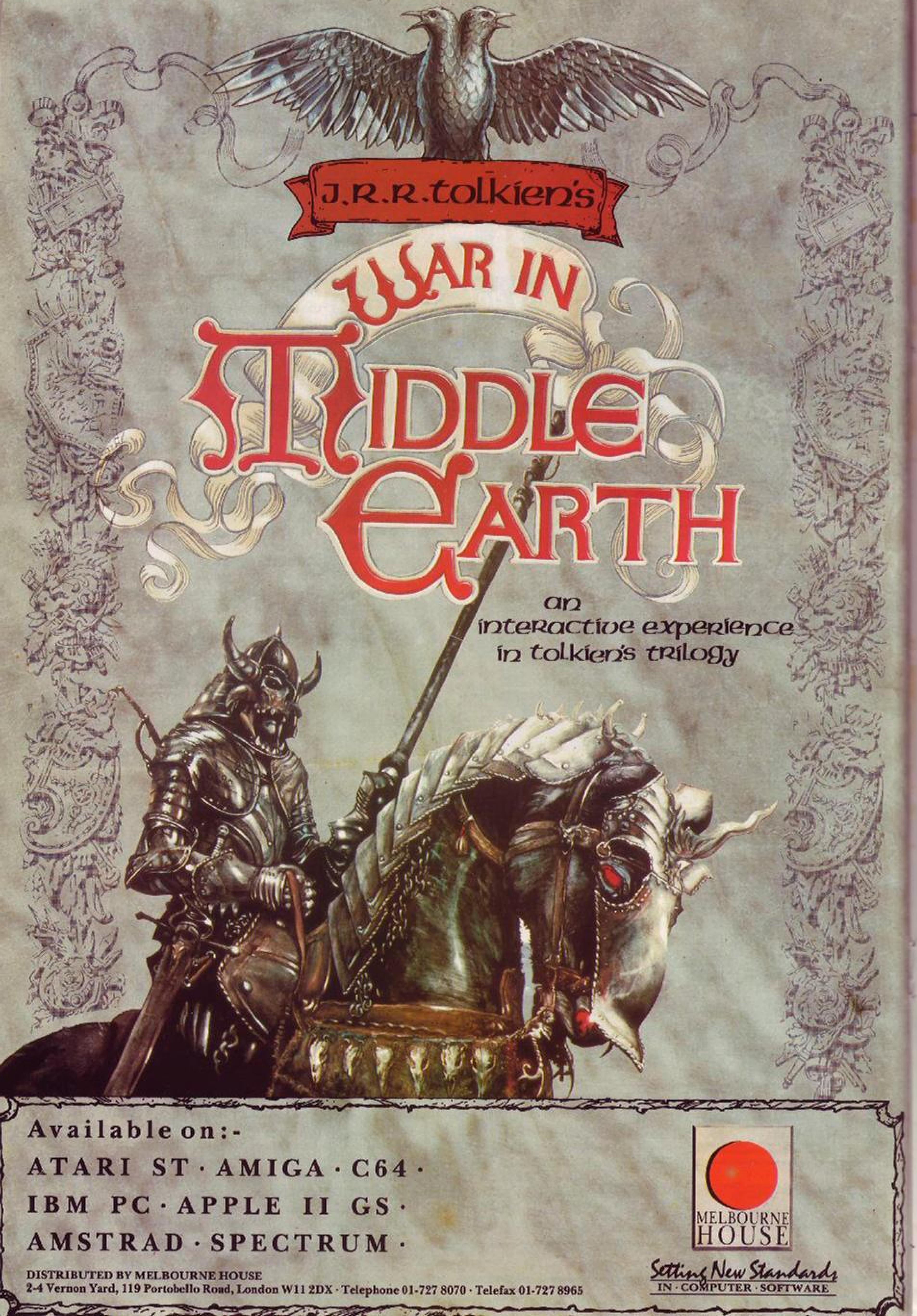
Securicor usually deliver orders I have placed about mid-morning, and I put records of these deliveries onto *Atlast*. The remainder of the day is spent taking orders, seeing to customers, noting down the day's new releases, getting an order together for my suppliers and other general enquiries until about 5 o'clock. Then



it's out delivering in the local area. This includes installing computers for customers, picking up computers for repair – mostly Commodore 64's and Spectrums: CPC's seem to be very reliable – and offering advice to potential customers.

Lastly it's back home to adjust the stock control, list the day's takings on *Planit*, write letters on *Tasword* and, while my wife Pauline does the books, a quick game of *Pirates*, *Elite*, *Gunship* or *Roadblasters*. Accounts are done at the moment in the old fashioned big red book, but Pauline is experimenting with *Office Master* for a few months to see if it can offer a better system.

I know from personal experience that the CPC is quite capable of maintaining a small business such as my own, and if I had the time I'd spend it trying to convince others of the fact. The truth is there's no absolute need to part with thousands of pounds, and indeed for most people such a huge investment is completely unnecessary. After all, these computers are supposed to be working for us, not the other way round! ●


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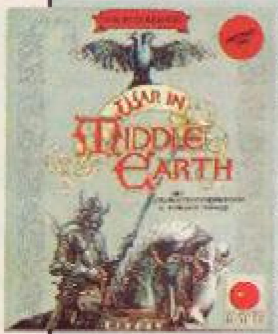
ACTION TEST

Enter TRENTON WEBB, the wild man of games reviews

- Hobbit forming – or not? (This page)
- *MASTERGAME: Chuck Yeager* (p.37)
- Microprose get *Airborne* (p.39)
- *Treasure Island Dizzy* (p.42)
- and *Rambo III* (p.50)

WAR IN MIDDLE EARTH

Mastertronic ● £9.99 cass (no disk) joystick/keys



War in Middle Earth is yet another in a long line of games – such as *The Hobbit, Lord of the Rings* and *Shadows of Mordor* – based on the works of JRR Tolkien, and indeed attempts nothing less than to capture the essence and plot of his classic *Lord of the Rings* trilogy. The computer plays Sauron, all-around bad guy and maker of the One Ring, into which he poured the majority of his power. Unfortunately for him he lost it in a war with a guy called Isildur.

Understanding *War in Middle Earth* is easy enough. You start out with a campaign map of Middle Earth, which fits onto a screen. By moving a pointer to a part of the map, you can zoom in on the forces there. From here you can give orders to individual units, telling them to move to a destination, merge with another unit, or follow a unit. This system is very simple to understand, because you alter everything with directional movements and a fire button.

The problem is that individuals are treated for movement in exactly the same way as armies: that is, they spread out while moving. So that, when a band of screaming orcs descends upon one of the Fellowship, chances are that they're on their own.

There is a way around this: just hop from location to location. It cuts down the difficulties involved in movement, but it's very time consuming. I really can't see why nine people should have to be spread over hundreds of square miles. Once contact is joined with the enemy a battle screen comes up. On here is a representation of the battle, and a cursor. By moving the cursor onto one of your troops and pressing fire, you can give him (him, note: there no females, not even Queen Galadriel) a target enemy to go and fight. Apart from defending themselves, your troops have no other way of fighting the enemy – that is, they're too stupid to work it out for themselves. The battle scenes can't be skipped either. You have to endure watching the same graphics making the same moves, over and over again.

I'm not impressed. There are one or two bugs in the game, which sometimes keep the battle screen up even when you've dealt with the enemy. Sometimes your troops multiply: Boromir once had a string of clones behind him, all moving in perfect time.

Compared to the excellent 16-bit versions on the ST and Amiga (both of which I've seen), the CPC effort is mediocre. That's not to say you can't get some fun out of the game, only that it's not really worth the effort. **PbM**

SECOND OPINION

"You'd have to have a pretty strong Hobbit habit to need feeding with War in Middle Earth. *Pretty packaging – shame about the game."* SC

GREEN SCREEN:
A foggy day in Middle Earth



● Not Hobbit forming enough



● Get a load of the rings

The Verdict

GRAPHICS 68%
- ☐ Campaign map is good.
- ■ Other bits average.

SONICS 66%
- ☐ A tune beeps keeps the action going.
- ☐ And the spot effects are fine too.

GRAB FACTOR 41%
- ☐ You try so hard...
- ☐ The game doesn't want to know.

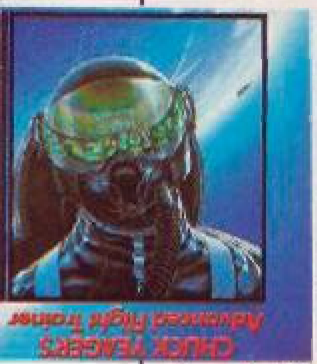
STAYING POWER ... 58%
- ☐ 15 levels of difficulty.
- ■ Not even level 1 is easy.

AA RATING 57%

- ☐ Could have been brilliant.

CHUCK YEAGER'S ADVANCED FLIGHT TRAINER

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In the middle of a Cuban 8 the engine stalls. Suddenly your P-51 Mustang is flying – downwards. Attempts to restart the engine cause the plane to pitch and yaw helplessly. You're pulling negative G's and begin to 'red-out'. This is it. Curtains. Unless, that is, the hours you put in on General Chuck Yeager's Flight Trainer have taught you how to survive such a potential disaster. Those who followed the tutorials will live. As for the hot dog pilots who didn't, shortly they will be no more than a hole in the ground.

Chuck Yeager's been there, done this, flown that, and as one would hope from a real life, top notch test pilot, the Advanced Flight Trainer he puts his name to is good. It requires just the right balance of technical understanding, progressive learning and seat-of-the-pants barnstorming to make flying your CPC more realistic, more fascinating, more enjoyable and more hair-raising than ever before.

There have been flight simulators before, and no doubt there are many more to come, but nothing is going to touch *Chuck's AFT*. For while there are many excellent simulators, their strength has always been in the completely accurate re-creation of one vehicle. General Chuck (as he's known to his friends) gives you the chance to fly *14!*

Yes indeedy, it's pick and choose time between some of the most famous aircraft ever built – and a few that never made it past the concept stage (when you fly them you'll see why). Start with the Sopwith Camel and Avion Spad XIII of the First World War, move up through Spitfires and Mustangs up to modern day classics such as the Piper Cherokee and the Lockheed SR-71 'blackbird'. Each vehicle varies enormously in handling and flying technique, as you can imagine with speed and weight differences of over 2,100 mph and 143,000 lbs. This is a lesson you learn the hard way, often at the cost of a plane.

> **"Never believe anything another pilot tells you about how to fly."**
> **– Chuck Yeager**

One minute you're behind the 'go-stick' of a small Cessna 172 Skyhawk banking and turning with ease, any mistake easily rectified. Then flicking through the plane menu you feel the need for speed. So it's time to hop into the cockpit of the Bell X-1 and discover what it's like to ride a bucking bronco at MACH 1 at 50,000 feet. Time to relive your breakfast, and find out why General Yeager is known as 'Chuck'. It could just as well have been Hughie or Ralph.

The Advanced Flight Trainer, it must be said, is not at its very best for joyrides – although the occasional power dive from a few thousand feet is good for the blood. No, as its name suggests, the emphasis is on the development of simulator piloting skills: not for any dull, purely academic reason, but so you can exploit the *AFT* to its full. For then it comes into its own, and allows crazy manoeuvres and stunts in wholly impractical aeroplanes.

After loading, you are offered a choice between a demo flight, flight instruction and aerobatics, plane racing, test piloting and formation flying. Each of these different schools requires different levels of skill within the discipline. Best of all for the complete beginner (or complete crash artist) is the flight instruction mode. This helps to guide you through an intensive course of basic flight techniques.

SECOND OPINION

"So there's no combat. Some people will miss this, and I did at first. The goal of the program, though, is flying: to take each aircraft and get the best performance out of it without crashing. So it's more frustrating than other simulators, but with a lot morechallenge than just blowing away squillions of dumb enemy pilots (yawn). Shame about 64K owners – it's yet another reason to buy a memory expansion.

PbM

THE SCREEN IN GREEN:
can be seen

There are three styles of flying lessons: basic, advanced and aerobatic. Every level has an additional pull down menu which allows you to specify which manoeuvre you wish to learn, such as takeoff, descent, steep left turns, power off stall or an Immelman turn (sort of turning your stomach inside out). The instructor (good old Chuck himself, I guess) flies the plane until you wish to take over and then prompts your actions, by way of a message board and head-up display cursor.

The rest of the controls, obviously tailored to achieve some kind of conformity for the ease of us would be pilots, all manage to achieve some individuality in speed of response, calibration of instruments etc. Analog displays are difficult to recreate on the screen, but they're clear and easy to read, employing colour for contrast to heighten readability (who needs 'em? I just find the ground and aim for it).

AA MASTER GAME

The use of graphics outside the cockpit, is at once disappointing and refreshing, the weakness of one area balanced and almost explained by the strength and originality of others. The landscapes could be viewed as disappointing considering the length of time the conversion to CPC took to arrive. The blocks and pyramids that go to make up the buildings and obstacles, are perfectly crisp from a distance, yet as they are approached on occasion they sometimes tend to lose some definition and make ultra-close navigation impossible (but then again who wants to fly that close to a pyramid at 400 mph?). To give you some idea, the pyramids aren't quite as good as *Total Eclipse's* – but then again you're moving much faster.

> **"We flew from dawn to dusk six, days a week...I logged 100 hours of flying that first month. Hog Heaven..."**
> **– Chuck Yeager**

The not so hot surrounding graphics can be forgiven instantly though when you take into account the variety of views from which you can watch your aircraft's progress. Yes, you can flick happily between no less than *ten* perspectives, to get the best view of yourself crashing (sorry, 'buying the farm' – forgetting my test pilot jargon there). There are three from outside – the tower, a satellite and a chase plane – and seven from the plane itself: left, right, belly, up, full forward, rear and the cockpit. All have a zoom feature for a really good look. Since the emphasis of the *AFT* is on learning to fly aeroplanes, the balance appears to be just about right: there is, after all, only so much room on one disk.

Enough of this stuff about the controls! Let's get down to some serious flying, because that's what *Chuck Yeager's* all about. The first few moments of overreaction are soon compensated for, and before long you're flying as free as a bird (a rather overweight bird, but never mind). The trick is not to get lulled into a false sense of security, and to think that after one guided manoeuvre that it's time to pilot an f-16 in for a hasty landing. Try the tricky stuff too soon and you could well end up with a medal. But awarded posthumously.

This is not to say that you can't get away with dangerous flights, or the occasional reckless landing (wreck-full?). Death is never fatal in the *AFT* world, and the



● The right stuff



● Two sample menus: above, choosing your tutorial; and right, choosing your plane. – Yeager occasionally adds his own sarcastic comments, such as: 'How about going back to ground school?' Thanks for the encouragement, Chuck!

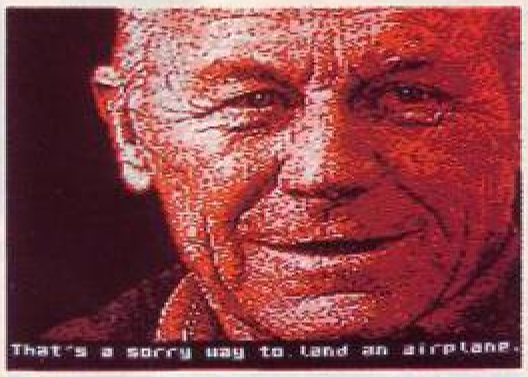
worst that can happen is one of General Yeager's caustic comments, delivered by a screen portrait in glorious glowing red: *'That's a sorry way to land an aeroplane!'*

When the basics have been covered, and your ego and stomach have recovered from the embarrassment of totalling aircraft on even the simplest of manoeuvres, you feel the need to reach for the skies solo (so low you might survive the crash). Of the options available, test flying is by far the best for the first time pilot fresh from instruction school. Unlimited flights can be made to the various airports, the aircraft race track, and the many aerobatic obstacle courses (these are all quickly reached via the main and pull down menus), but for the first few flights a bit of harmless sight seeing is a good way to get the feel of many planes.

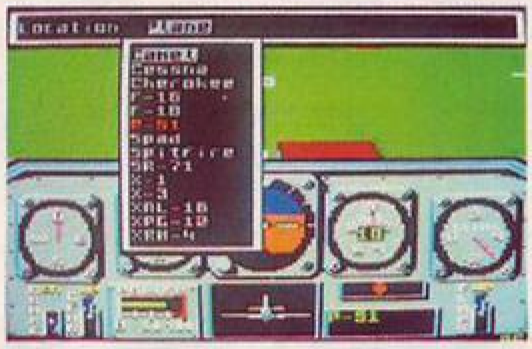
On the test flight section the aim is to take the plane of your choice and thrash it

> **"Going faster is one of the things I always found myself doing. I guess it's one of the things I enjoy most."**
> **– Chuck Yeager**

until you know how fast, how high, how much of everything it can do. With planes such as the Sopwith Camel it's good fun to take them way beyond their service ceiling and then to loop and dive these delightfully lightweight planes. The real fun starts, however, when you choose to play with monsters like the X-1, F-16 or even one of the *AFT* experimental aircraft. Ridiculously fast, the modern age jets rip through the skies as you fight to control these most



● The man himself: Chuck (why not Ralph or Hughie?) Yeager





● Farm for sale. Any buyers?

ferocious of beasts, which find the ground strangely fascinating, and simply obey the laws of gravity whatever the cost to you.

The limits of each aircraft are explained in the excellent manual, where the rather austere side of the game's emphasis on learning is offset nicely when the manual challenges you, the test pilot, to go higher (the SR-71 is claimed to have reached 164,900 ft!), climb quicker and dive faster than even the manufacturers claim – and they were the ones trying to sell it! Watch out though: go too far, too fast and you may blackout/red-out. Do so and the screen realistically blanks out in the appropriate colour until you recover consciousness. Flying in the dark ain't easy, and crashing is.

Other options are available. The formation flying and racing give you something completely different. The lonesome pilot no more, now it's time to mix it up with the big boys. Then there's aircraft racing, which takes you to a series of courses, all

> **"Be careful... Experience makes the best test pilots... In most cases experience and auger jobs don't mix."**
> **– Chuck Yeager**

designed not only to give your competitors a better chance than you, but also to test the level your skills have reached. Finally the formation flying has you following a predetermined course, in and out of obstacles, this time on the tail of a lead plane. *(Note: the option to record these flights for future enjoyment/embarrassment is available for 128K users. This is the only real minus point for a number of CPC users, as understandably but regrettably the AFT only has a very limited scope in its 64K guise. You are only able to enjoy the test flight missions.)*

Chuck Yeager's Advanced Flight Trainer will have you looping and rolling for hours on end, regardless of which version you buy. It features realism by the bucket load, and has such a variety of missions and vehicles that the casual pilot who just wants to break the sound barrier every now and again will be more than fascinated.

Finally, though, its greatest asset is its ability to entertain and at the same time remain constructive – that's if you don't count crashing a multi-million pound aircraft as anything but self-destructive. It's proof, if proof is needed, that not all computer games are mind-numbing excuses for slaughter and mayhem. To fly these planes properly you've got to understand how they behave and respond: when you do the sky's – and in the SR-71's case beyond – is the limit. TW

FIRST DAY TARGET SCORE:
Not applicable: just have fun!

● Chuck Yeager's Advanced Flight Trainer is due out in the second half of February

The Verdict

GRAPHICS 90%
- □ The variety is astounding.
- ■ Landscape outlines sometimes rough.

SONICS 62%
- □ No tunes but plenty of effects.

GRAB FACTOR 82%
- ■ Almost over complex at first.
- □ But you'll make a pilot yet.

STAYING POWER 100%
- □ Fasten seatbelts for a long, long ride...

AA RATING 91%
- □ Just like being a pilot, only safter!

AIRBORNE RANGER

Microprose ● £14.95 cass, £19.95 disk joystick/keys



Meanwhile in downtown Antartica a lone American steals toward the enemy base. He (we can assume it's a man, I think: no woman would be so daft) has been parachuted into hostile territory. His mission, sabotage. Yesterday it was fighting in the desert to rescue hostages, and the day before that, kidnapping an enemy officer. Any time, any place anywhere, there's a wonderful world you can share: that's the Airborne Ranger, a versatile (and overworked) soldier who's just dying (maybe literally) to kill.

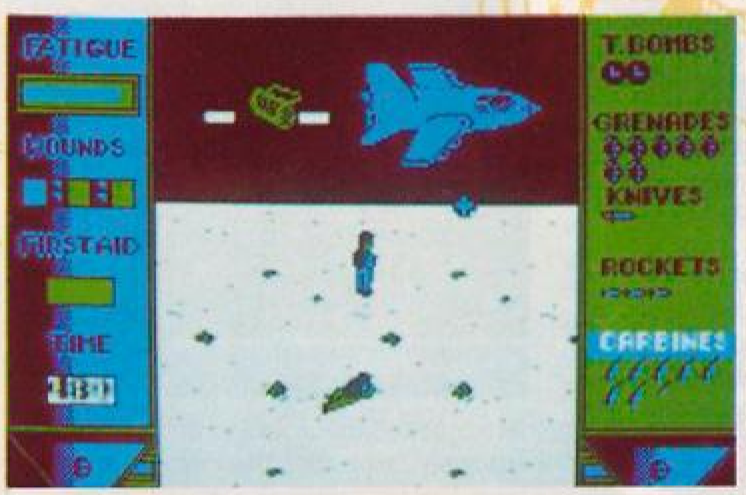
Those action simulation people Microprose have moved into the realm of arcade style combat games, where the Airborne Ranger is a keen, lean, mean, fighting machine trained to perfection at taking missions only the very best (or the suicidal, or immensely stupid) would attempt. Yes, you are that soldier and your country needs you! So pick up your M-16, grab some grenades, praise the Lord and pass the ammunition, 'cause you've just been drafted to serve Uncle Sam.

Microprose's rock solid reputation is based largely on the simulation of technology with games such as the marvellous *Gunship* (AA37, 82%) and *F15 Strike Eagle* (AA24, 85%). *Airborn e Ranger* marks a departure. Now you get to control a man rather than a machine, and with no high-tech weapons or warning systems it's brain power that will win the day – but only if it's allied with a skil....ful use of your very limited arsenal. *(Rangers? Arsenal? When's he going to mention West Brom? – ed.)* Stealth and good planning are as essential to success as speed and daring.

Airborne Ranger is an action strategy game that neatly balances the frantic fun to be had from pure shoot 'em up-style games with the more edifying pleasure of spotting and exploiting the weak spots in the enemies' defences. For the game is ostensibly a battlefield simulator, but you have the choice of which battle, the danger level and choice of tactics.



● All together now: 'I wanna be an Airborne Ranger. I wanna lead a life of danger. I wanna nice short back and sides but not too much off the top' *(are you sure that's right? – ed.)*



● If in doubt – take it out!

The game commences with a choice of missions, all with varying difficulty levels, peculiarities and individual testing sections. These range from the theft of an enemy code book, to cutting a supply pipeline, to rescuing P.O.W.'s. None looks particularly intimidating but then again...

After choosing which corner of a foreign field will most likely be forever yours, you are presented with the option of how dangerous you want the mission to be. There's no setting for completely simple, unfortunately, but there you have it. Having named your poison it's off to the wild blue yonder, to get airborne and start ranging.

You are dropped into enemy territory from a low flying aircraft. The screen (in the form of the map used later) then shows you the terrain which you must cross not only to achieve the objective of your mission, but perhaps more importantly to reach the pick up point, that lovely spot where you are whisked back to safety. At this time you also get the choice of where to leave supplies – ammunition, grenades and first aid kit (you won't want to forget *that!*) – for Ron (later Ron).

And now, the moment you've been waiting for: it's time to tumble out of the plane towards terra firma and commence your task. The scene changes to where you've landed. Three terrains are available: arctic, temperate and desert. While they exhibit variations in map notation they are much the same (but temperate is far and away the prettiest on which to meet your maker). Happy landings are a thing of the past: it's carbine at the ready and time to explore the three dimensional landscape, and to find that foe.

The Ranger (he's the one in the natty blue boiler suit. Mmm, very nice) must now fight his way to the target. A check on the position of the supply pods, his own present situation, the objective and the pick up point (the most important by far – *mummy I want to go home!*). Having established where you are, and where you want to go, the choice is how to get there. Basically the options are speed and stealth, each having its merit at different times. You must decide from the intelligence map the best tactic. The sensory activated machine guns nestling in the bunkers, for instance, shoot and rarely miss, so caution is the thing there. Traversing wide open spaces, on the other hand, invariably attracts those chappies who for no apparent reason have taken such an instant dislike to you, so it's time to get the Reeboks on and make like Ben Johnson (before they asked for the medal back).

The Ranger is miserably armed on landing, with just a M-16 carbine, a few grenades, a knife, some time bombs and just the one anti-tank missile. Honestly, how *do* they expect a soldier to do his job? So your first task is to locate and collect the supply pods you dropped for yourself. There is, however, a very strict limit to the amount the trooper can carry – bit tough saving the world with a hernia – so it's vital to space out your drop zones. The alternative, which is not rec-

The Verdict

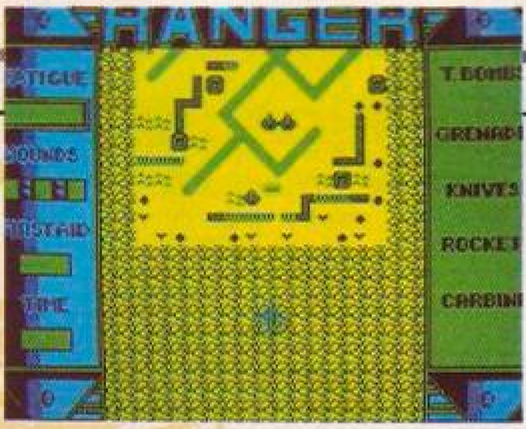
GRAPHICS 91%
- Absolutely brilliant in places –
- but only good in others.

SONICS 48%
- Not overwhelming – but useful.

GRAB FACTOR 93%
- Instant appeal, with quick play instructions.

STAYING POWER 88%
- Twelve different missions...
- And plenty of difficulty choice.

AA RATING 90%
- Great idea. Great game.



● The Ranger turns on, tunes in and drops out

ommended, is to ask your foes if they'd mind lugging equipment around, until you could kill them with it.

The current state of your armoury is shown on a panel to the right of the games screen. It informs you what's left to use, which weapon you're employing at present and the like. On the opposite side is your current health panel (how many of them you can kill versus how quickly they are going to kill you), which tells you how your stamina is holding out, how many times you've been shot (three wounds and it's time to play last post) and how much first-aid there is left in your pack to treat these wounds. One pack of first-aid heals one wound, and there are only four packs available. So you be careful now, you hear?

Once again there's one of those Microprose maps (did they buy a job lot at a software auction, do you think?) to plan the best way of approaching your target, making sure you pass by the supply canisters along the way. The routes you choose depend on the task in hand: on some routes contact with the enemy is discouraged, as the objective may scarper (they also kill you), while others require no such stealth.

When the noise of bullets flying past your ears starts to get tiresome, and a bit of serious hiding is called for, the landscape provides all manner of cover – walls, tree stumps and some impressive graphics of trenches to cower in.

When you've finally fought, crept, crawled and blasted your way through to the muck, bullets and barbed wire, it's time to earn your crust as one of the soldiering elite. Rather than just fighting and killing a bigger, more powerful version of the same opponent you've locked horns with all game long, however, each mission features a different task as a finale. Some involve the use of the time bombs collected en route to blow up installations (which needless to say upsets the locals a touch) and thus



● It's time to go over the top!

makes surviving to celebrate your victory that much less likely.

Other missions require that as little attention as poss is attracted to your person, such as photographing an enemy aircraft (nice touch with the flashgun, very Fleet Street hack).

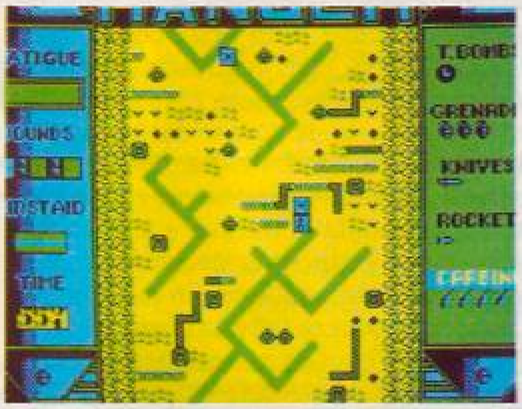
After completing your task it's time to recall the pilot who dropped you in this mess in the first place. But guess what? *You've got to wait around for him to arrive!* Don't pilots and Rangers get on or something? First he drops you miles away from where you want to go, then takes his time on the pick up. Honestly, it's like the 74 bus.

1While you wait just keeping yourself alive – let alone anyone you've kidnapped/rescued – can prove terribly tough on the nerves.

All this action is played out on an impressive (but not, it must be said, stunning) three dimensional screen, with a landscape which scrolls past as the Ranger remains central. Graphic effects for the trenches provide some nice touches, with Mr Airborne disappearing from sight momentarily as he dives into them, or as he crawls under the lip of a trench for protection from fire. Other graphics, though, fall just short of this high standard and most certainly do not live up to the level of the Commodore 64 screenshots (cheek or what!) on the packaging.

Similarly the movements of the slightly jerky sprites are good but not exceptional. The targeting of the weapons is a great solution to a tricky problem: a cursor floats in front the Ranger and anything in that line of fire is deemed to have been hit. This cursor is also far more mobile than the Ranger himself, allowing for greater (in)accuracy when the going gets tough and the tough get going, without having to be constantly moving your man from cover.

The tolerable sound effects are essential to your survival, since they give you



● So the circle with a cross is a *tower*. Ah!

early warning either of approaching troops or of automated machine guns. There is hardly any music, except a tiny snatch as you move between two of the screens.

You may feel that twelve missions is not enough. Take into account your ability to select the relative difficulty of each scenario, though, and the scope for continued enjoyment of this game is vastly widened, as is the number of situations in which you may win death or glory.

Airborne Ranger is fast and fun and calls on the old grey matter just enough to save itself from standing with the mass of 'Wham! Bam! You're dead, man!' games. Practice soon improves you ability to aim the carbine and the strategic level of your thinking. Then it's time to start winding up the degree of difficulty and choose a harder mission. Don't fire 'till you see the whites of their eyes. **TW**

FIRST DAY TARGET SCORE:
Complete a mission

SECOND OPINION

"There are plenty of Commando style games around, where you run up the screen shooting the enemy and staying alive. The genre is certainly fast and furious, but it's never taxed the grey matter much.

"Until now, that is. Airborne Ranger has in addition the strategic features of objectives, limited ammunition and so on.

"What's impressive is that, in gaining them, it has lost none of the blood-thumping action. It's in a class of its own.

"It has to be said that for long term gameplay it doesn't measure up to the likes of Gunship.

"At the same time, though, additional excitement exists in the fact that completing a mission is not guaranteed by skill or planning.

"Pace and action are very good indeed. The only minor niggles are the price – which is on the steep side at £20 – and the look of the game, which could and should have been more colourful".

PBM

THE SCREEN IN GREEN:

Some onscreen info, such as the wounds indicator, becomes invisible. But still playable.

ACTION TEST

TREASURE ISLAND DIZZY

Code Masters ● £2.99 cass joystick/keys

In the beginning there was *Dizzy*. For those of you not acquainted with the little chappie (where were you when we featured him on our cover cassette just a few short months ago in *AA*37?), Dizzy is the Oliver twins' egg-shaped character who bounces around with a stupid grin on his face, getting himself into trouble all the time and generally finding life rather too much to cope with. (Just think of Pat McDonald and you won't be far wrong.) Anyway, as I said before there was Dizzy; and now there is *Treasure Island Dizzy*. We're promised – threatened with might be a better phrase – a whole string of sequels: *Dizzy – The Yolk's on Us*, *Dizzy – Eggcentric Millionaire*, and dozens of others (a tenner for the best Top Ten Rotten Egg Puns at the usual address).

If you bought *Dizzy*, read our Codemasters profile in *AA*36 or played the *AA Special Edition* you'll know already what to expect. It's a sideways scrolling flick-screen game, with Dizzy bouncing or walking along and confronting various obstacles and difficulties. Your first problem, for instance, is how to get an egg-cit off the beach, and neither of the two options available to you seem very hopeful. On your right is the sea – and, as the instructions point out, 'everyone knows that eggs are airbreathers' (oh really?). But if you jog or bounce leftwards you come to a cliff *(that's enough mincepies and wine – ed.)*. The solution would seem to involve that empty wooden chest you see over there... I shall say no more, except that anyone who can stand on their chest must be a contortionist. Still, it's a *step* in the right direction.



● Location: a treasure island. Objective: escape. Motto: 'I am an egg, I am not a number'

Having solved that one, you amble along nicely for a while, collecting tubes of toothpaste, clumps of mushrooms and copies of *Sinclair Abuser* (surely that can't be of any use, can it? The joke, by the way, is an Oliver twins complaint about what happened when Dizzy visited *Sinclair User* and had the stuffing knocked out of him – literally!).

As usual there's the traditional Oliver twins voice synthesized phrase at the beginning of the game. For a change it's crystal clear, and you can distinctly hear the phrase, 'Hobbalub a lubbalub'. Tell me, does anyone else apart from the Olivers and their Code Masters chums *really* think a couple of garbled words adds significantly to the game's attraction?



● The Oliver twins' latest egg-stravaganza

There's a gorgeously mindless little toon (courtesy of David Whittaker) playing incessantly that will pretty soon have your mum chewing the carpet, but other than that there aren't any sound effects. Controls are fairly basic: Z, X, space and enter for left, right, jump and pick up/drop or use respectively. Or alternatively you can use the joystick.

Your mission, as Dizzy stuck on this Treasure Island, is to escape. There are two routes: one tricky, and one even trickier. The first is to find a way off the island and, as the twee scenario puts it, 'back to the Yolkfolk'. The other is to collect all 30 pieces of treasure that lie scattered about the place. This is by no means as easy as it sounds, for some of them lie in apparently inaccessible places, and others are hidden under other things. In reality, of course, the *real* aim of the game as far as you're concerned is to wander around collecting treasure as you explore your island. You catch sight of an interesting looking area, only to find that you can't get there – which of course makes you want to find out what's there all the more – and your immediate objective becomes to find a way to it.

Take care, however, for you only have one life. You can be bouncing along quite happily, for instance, when all of a sudden you get clobbered by a huge cage dropping out of the sky. Not a thing you can do about it, either, except pick yourself up, dust yourself down, and start all over again. It's all tremendously egg-citing (ouch).

It can hardly be said that *Treasure Island Dizzy* represents any great advances in computer technology – the controls, for instance, are unsubtly 'blocky' – but then again that doesn't make it a bad game, and especially when it's £2.99 (Codemasters' new bottom price level). In fact I enjoyed it tremendously, and was keen to keep on playing it – except that young David, who was in the office at the time, wouldn't let me. Still, a clip round the ear soon sent me – er, him – packing.

If you want strategy, hard intellectual effort or the opportunity to blast away at dozens of aliens or soldiers, steer clear. This ain't no Microprose *Gunship*, and it ain't no *Op Wolf* neither. But if you know the Oliver twins' work and enjoy it you'll need no further recommendation. **SC**

P.S. When you pick up the spade in the sea, remember to come out of the water before you use it. Otherwise, when you put down the other items you'll also have to put down the snorkel – and you'll drown, as I found out to my cost!

SECOND OPINION

"I liked it. It has good graphics and the music is a cheerful little tune. It's easy to start playing, though the controls aren't very sensitive. You should get more than one life, because it's a bit too difficult and a pain to have to go back to the beginning every time.

"Overall I think it's brilliant for the price. I'll probably buy it myself."

David Patient (12)

THE SCREEN IN GREEN: *fine*

The Verdict

GRAPHICS ... 74%
- ☐ Dizzy is instantly recognisable and moves amusingly.
- ■ Very samey backgrounds: trees and steps all the way.

SONICS ... 64%
- ☐ A persistent cheerful tune...
- ■ Five synthesised words – big deal! Where's the sound effects, lads?

GRAB FACTOR ... 84%
- ☐ Instant appeal. You'll be hooked!

STAYING POWER ... 63%
- ☐ You'll keep trying to get off the island.
- ■ But when you do, that's it.

AA RATING 80%
- ☐ Hugely enjoyable, it will be welcomed by all *Dizzy* fans.

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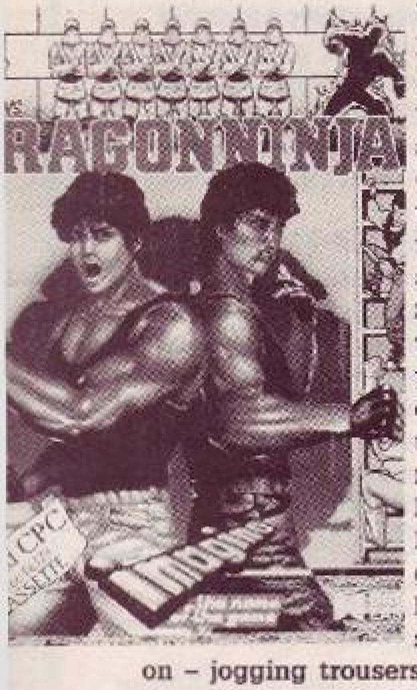
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BAD DUDES vs. DRAGON NINJA

Imagine ● £9.95 cass, £14.95 disk joystick/keys

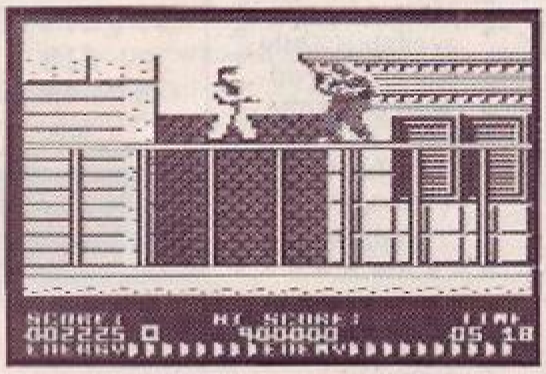


You know what a Ninja is, of course: a man or woman trained to kill, schooled in martial (rather than marital) arts, the use of weapons and ancient poisons. Still, someone's got to have a go, and you are that someone. There is one thing in your favour: you're a Bad (who's bad?) Dude, and you're going to kick some Ninja tail. So it's street fighter garb on – jogging trousers, black vest, headband and a pair of those fingerless black leather gloves – and get let's r-r-r-ready to r-r-rumble!

The President of the good ol' US of A has been kidnapped and these naughty Ninja are responsible. The American security services, showing infinite belief in their own highly trained special forces, ask you to go and rescue him, please? Pretty please? (Very reassuring I must say, the most powerful man in the world has to be rescued by someone called 'Bad Dude'!).

Luckily Bad Dudes happen to be even better in the kicking, punching and general all round violence department than the Ninjas, so you do stand a chance, even if it is very slight. This is because while you've got the strength, they've got the numbers. There's so many at times that you'd swear there was a production line for the blighters back in Japan (I can see the headlines now: Cheap Ninja Imports Flood World Psychopath Market).

Things start badly and rapidly get worse. There you are taking a stroll across the horizontally scrolling screen, and all of a sudden a marauding gang of killers leap out. So you have no choice but to beat them into submission. No sooner have you finished dusting your trackie bottoms off though, than the rest of the Dragon Ninja Fan club turn up. So same as before, a few well placed blows and down they go accompanied by some supposedly bone-crunching sound effects.



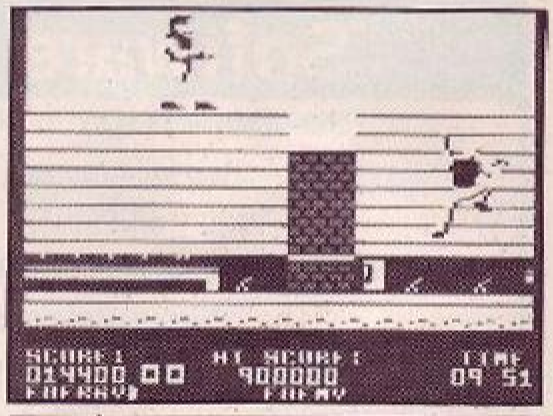
● You get to meet the big guy and kil him. Well, either that or he kills you...

This continues, punctuated only by the chance to punch women (obviously equal opportunities violence) and kick a dog (the dog's worth more points!) until the end of the stage is reached. Then the skittle people stop, and along comes the real meanie. Now things get really tough, because this guy, despite his rather out of condition appearance, doesn't collapse after the first punch, or the second, but keeps on slugging. Never mind. You're a bad dude, you can handle it.

Now as players of this style of game know very well, to improve your chances of survival there is ample opportunity to increase your already noteworthy array of death dealing abilities. For when your litter lout foes drop their weapons, you can retrieve the chain, knife or whatever and put them to good use. Ninja pulping.

Having bashed, thrashed, mashed and trashed your way to the end of each section and made mincemeat of the big (and I mean big) guy at the end of the level, the location changes but the tempo remains the same. Fast and furious again, only this time situated on top rolling trailers, so extra care has to be taken when leaping between compartments. Lose one life too many now and you'll never make it, and hours of endless carnage will have been missed.

The number of lives, health, time remaining (no slacking here, it is high speed aggression on demand), as well as the strength of your current foe, are all illustrated on a very basic panel below the main action screen. Not that this is that important to the accomplished Bad Dude, since there are extra energy points casually left lying around, just are there are time capsules. These allow you more time on the stage, not only to complete it but to commit more acts of senseless violence.



● Bad Dude goes train surfing

Dragon Dudes vs. Bad Ninja is a high speed foray into the realms of an extremely violent fantasy indeed, its arcade nature ever present in the speed of each level. In fact every encounter is at such a pace that survival is measured in minutes and is not considerd an option. This can be frustrating at first as while learning the way (of the Dragon) the game is played all you do is keep the undertakers on overtime.

This game is just the kind of thing Mrs Whitehouse, Geoffrey Dickens and Wm ACC Smith would like young people 'protected' from, and I have to admit a certain queasiness about it myself. Still, I've always believed that games players' abilities to distinguish fantasy from reality is considerably better than that of politicians and soapbox censors. This is not the ideal way for those people who detest gratuitous violence in computer games to spend a Sunday afternoon. But if the brain needs a rest, and you've some aggression to work out, punch up the game and not the neighbours. People, whoever they are, feel pain just as much as you do: sprites don't. **TW**

SECOND OPINION

"Quite a good game with the sound effects and the graphics. You could pick up useful weapons eg. a type of sword. One thing that I didn't like was that the game ended quite quickly." ***Gavin Hawkins (11)***

"I liked the game, especially the graphics which were excellent. The range of opposition isn't overwhelming. The sound is also reasonable, a very addictive, easy to play game. Overall good value."

David Patient (12)

THE SCREEN IN GREEN:
No plobrem, glasshopper!

The Verdict

GRAPHICS **77%**
□ Big bold sprites: but a bit too blocky.

SONICS **61%**
□ Very oriental opening theme.
■ Lots of audible violence.

GRAB FACTOR **63%**
□ Fun, but fatal too fast.

STAYING POWER .. **69%**
■ Not much variety.
■ Almost too much action.

AA RATING **68%**

□ Above average Kung Fu slug-it-out.

FIRST DAY TARGET SCORE:
Complete level two

TITAN

Titus ● £9.99 cass, £?14.99 disk
joystick/keys

Titan is a futuristic spectator sport that's all the rage in Vegapolis (a city built on the profits of the meat free hamburger, by any chance?). It involves guiding a power ball across artificial worlds by bouncing it off walls and up corridors with a magnetic bat. You are the bat and thankfully, as this can be a very long game, the bat gets nine lives (meeeow). The game is played by hitting and destroying cubes with the ball in an *Arkanoid (AA22,* 88%) fashion, a process complicated by the presence of the death icons, whose sole aim in life (death?) is to stop you completing all the levels and claiming the 1000 Kronors prize (which doesn't sound a lot for what you have to go through).

SECOND OPINION

'Titan looks absolutely stunning, and on that score alone it deserves your immediate attention. And, like many of the old classics, it's a really simple plot that's just addictive enough to drive you completely potty.

"This game is dangerous. You won't want to repeat all the screens you've already done; but you'll be so desperate to get further that you'll play them anyway, hating yourself for doing so. If you have anything else to do – homework, housework or any other kind of work – for heaven's sake don't promise yourself 'just one game'. Two hours later you'll be still there, wishing you could stop..." SC

THE SCREEN IN GREEN:
Excellent – perhaps even better!

The next level is reached when all these cubes have been destroyed and you are transported to the next, totally different environment. Some levels feature boosters which speed you across the screen; others, walls that can be built up to trap the power ball in the same area as the cubes – and many other wierd and wonderful tricks and traps.

Titan deserves some kind of award for its brilliantly executed graphics. Strong bold colours are combined together for a striking games screen with just the right amount of shadowing to give depth without confusing. The scrolling is superbly swift and smooth – and since each level is about six screens square, speed is needed if you are to have any chance of catching your balls.

The introduction to *Titan* casually annouces that there are eighty levels to complete and that you have nine lives in which to do it, with no other constraints such as time limits per level. The task seems, if not easy, then at least achievable with only nine levels to complete per life. A bit of practice and it will be sussed, no hassle at all.

Indeed the first three levels bear this out, with not a death icon in sight: it's more a matter of co-ordination and timing than anything. Then and only then do the surprises start. The first is a rather neat little skull and crossbones. These horrible items are sometimes just debris there to block your path, and sometimes they're there to kill you. On the whole, staying well away seems a pretty good bet. Yet you become so used to charging around the screen like a mad thing that an accidental collision with one of the skulls becomes unavoidable. *Titan* life one, RIP.

One major problem/irritation (apart from getting wiped out and having to start the entire level again), is the annoying problem of having to clear up every block before you can progress to the next stage. This can take positively ages. Then there is also the problem set by some levels where it's possible to get blocked off from the ball or from the cubes and the level is therefore impossible to finish. At this moment of hair-tugging frustration you are, however, given a cop out clause: suicide! Not only is it painless, but it saves buying a new monitor after you've punched it for being such a pain in the chair department.

Therein lies the rub, for while you're playing this aggravation makes you want to reach for the plug, but then the 'one last go' syndrome drags you back again and again until you are a jibbering mumbling wreck obsessed with level 56. This could cost you more than you think, as say on average at five minutes per level, if you allow for mistakes, that's six hours of game play, even without breaks to eat, walk about, feed the goldfish or kick the cat. If you ever finished it in one sitting you'd need a medal (and professional help).

The Verdict

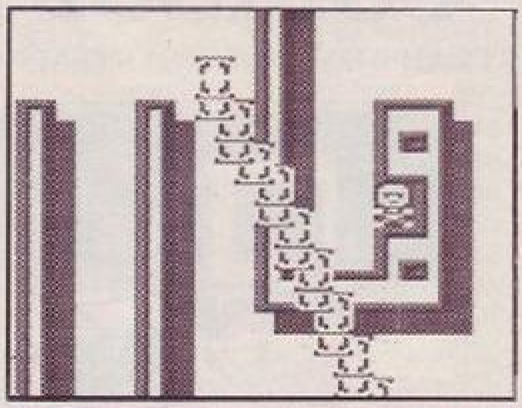
GRAPHICS 91%
☐ Magnificent colour and precision.
■ Overwhelming at speed.

SONICS 39%
■ Effects are fine – where's the tunes?

GRAB FACTOR 59%
☐ Not an instant thriller...

STAYING POWER 84%
☐ – but it gets to be a habit.

AA RATING 76%
☐ Frighteningly addictive.

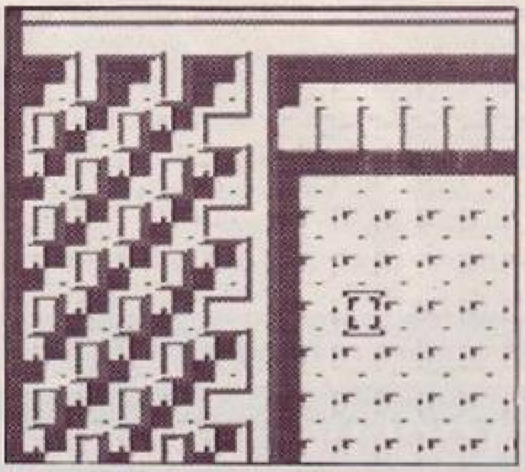


● 'If you ever finished it in one go you'd need a medal – and professional help!'

So *Titan* has its frustrating side. On the other hand it can also be crushingly dull at times, because on your way to higher levels it is necessary to mop up all the earlier ones before advancement is possible. So there is a lot of tedious mucking around (in hyperspace!) before the business of getting to a new section and more block bopping. While each level is sufficiently tricky to be interesting enough on the first few visits, play it repeatedly and the amusement rapidly turns to annoyance.

Paradoxically *Titan's* frustrating nature is its strongest suit. It's a good concept, well presented and with some truly awe inspiring graphic work backed up with good sound effects – though some music would have helped soothe away the boring mopping up sections. The visual pyrotechnics and almost indefinite game length guarantees that Titan will have you playing time and time again until your joystick can take no more, and the frustration drives you screaming from the room, swearing to find those Titus programmers and show them a *real* death icon. TW

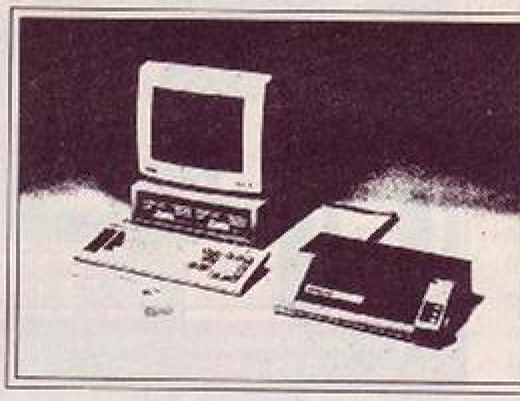
FIRST DAY TARGET SCORE:
50,000 points



● Warning: *Titan* is extremely addictive

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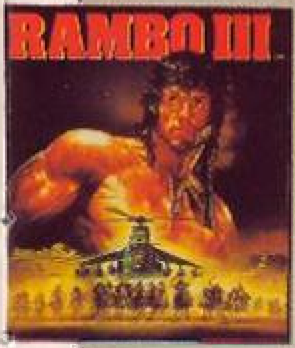
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RAMBO III

Ocean ● £9.95 cass, £14.95 disk joystick/keys



John Rambo, the most macho man alive, so tough he makes even me look like a bit of a girlie, is back. With guns smoking, muscles flexed, head-band blowing in the wind, he's looking for trouble, and he's most definitely found the right place. Those darned Russkies have been and gone and kidnapped that good old Colonel Trautman (the nerve of some people, there he was doing a quiet bit of spying and these big guys in furry hats get all upset and want to tie electrodes to his naughty bits!).

In the grand Rambo tradition, our hero faces these adverse situations with a witty grunt and a pull on the trigger, until the world is a safe place once more.

The game is in three sections: the rescue of the Colonel, the break-out from the Soviet compound, and finally the escape from Afghanistan itself. Each has a different objective (apart from slaying Russians of course, but only for the points you understand, no hard feelings), and each requires the use of different articles gathered along the way. The adventure takes place on a flick-style screen, with Rambo free to move horizontally and vertically. This occasionally proves irksome, since not knowing what lies beyond does not allow you to take preventive action – such as not walking into the guards, which does not do a lot for one's health. Rambo's well being is neatly shown by way of a portrait of Mr Stallone which slowly turns into a skull as injuries are inflicted upon your person. This features under the main game screen along with an inventory of the various vicious bric-a-brac to be collected *en route* and the weapon in use at the time, be it knife, pistol, machine gun or the old faithful bow and arrow (explosive tip? That'll do nicely).

In stage one the mission is to rescue the Colonel from the prison in which he is being held and to free any other Afghans you stumble across on your travels. This requires an extensive search of the compound as you try to gather the right tools for the job: infra-red goggles to spot intruder alarms, mine detectors (for detecting weapons, would you believe), ammo boxes to replenish your weapons for carnage later and rubber gloves to allow you to open electrified doors and the like. Who would ever of thought it – Rambo on the hunt for a pair of Marigolds! Having collected these goodies it's off to get Colonel Sam (shouldn't that be Uncle?). This requires lots of dashing around, but you must be careful, none of this blasting away with the first gun you find (when you can find one that is), because stealth is essential if you don't want to draw the attention of a large part of the guard to your person. The knife you possess at the beginning is often your best bet: it's silent, it doesn't need ammunition and the guards are generally pretty dozy and let you walk right up to them and do your dirty work, sending them off to watch over that great gulag in the sky. But if you just can't resist a blast from your machine gun, the alarm does die down after a while – if you survive that long!



● Don't push him. He'll blow you away.

The Verdict

GRAPHICS 73%
- ☐ Clear, well defined sprites.
- ☐ You feel a long way from your enemy.

SONICS 60%
- ■ I didn't know knives went 'phhutt'.

GRAB FACTOR 63%
- ☐ Dull start: gets much better.

STAYING POWER ...68%
- ☐ Good variety between stages.

AA RATING 67%
- ☐ A solid, playable licence that will keep you excited for a long time.



● Rambo. He's mean, moody and magnificent – well, OK, just mean and moody



● Oh, he's so butch

When you've found, rescued and presumably saved your beloved mentor from the evil camp, it's off to the great outdoors for a country stroll and a pleasant spot of boobytrap laying. Working your way northwards it's time to leave a few parting gifts for your Russian brethren in the form of bombs. The objective is to reach a helicopter that will whisk you to safety while you cause enough confusion, death and destruction to cover your escape. Only trouble is, you can't just do a runner straight for the helicopter (not that such a cowardly, albeit sensible, thought would ever occur to our Johnny). The helicopter won't be ready for your escape until you've primed every last bomb, the number to be made ready being indicated alongside the 'weapons selected' panel.

Strangely in part three the helicopter you fought so hard to get to is ditched and Rambo hijacks a tank. At last all this sly stealth business goes out of the window and it's time for some serious wasting. The tank is to be driven to the border, but the problem is, unfortunately (or fortunately, depending on your point of view), a few Russian tank divisions have turned out to say thanks for all those lovely booby traps in part two. So it's fun time, but caution is still the order of the day: too much indescriminate blasting causes your gun to overheat; and the tank is quite easily damaged, even by grenades. So be careful out there.

SECOND OPINIONS

"The game is reasonable, though it gets a bit boring after a while when you never find anything new. Graphics are brilliant, but I don't think much of the sound effects". **David Patient (12)**

"Very good graphics, but the sound's pretty awful. The onscreen inventory should be larger. You find things for weapons, but you can't find the weapon that it's for!" **Matthew Whelan (11)**

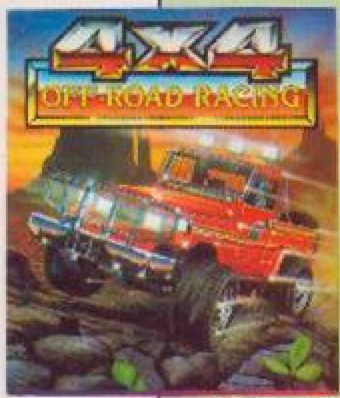
THE SCREEN IN GREEN: High contrast is OK

The layout of the game, and its reliance on cunning as much as killing, may come as a suprise. There isn't so much of the 'Ramboesque' machismo one is led to expect from the films. Neat touches are in evidence even if the suspense is lacking in parts. The injury level indicator, if slightly grotesque, is a refreshing change from simple bar graph indicators, while in part one the ease with which the guards can be dispatched does leave a little to be desired. Tell you one thing, though: Rambo on the CPC is a better actor than he is in the films!

TJW

FOUR BY FOUR OFF ROAD RACING

Epyx ● £9.99 cass, £14.99 disk
joystick/keys



Jeeps and buggies all souped up: thousands of horse power unleashed in crazy contests over insane terrain. It's no longer just man against man, but a challenge to nature itself, with the elemental forces of wind, rain and sun defied in a lust for glory. Well, that's the theory anyway.

If it's racing of that calibre you want you'd do better to watch Grandstand, because it ain't here, for sure. The essence of the sport is the headlong dash into the wild unknown, and without this spirit of high adventure, *4X4* loses its only chance. The game starts well enough, as you first choose your vehicle, then the course over which you will race. You choose: a petrol guzzling tank, or a lightweight but fragile roadster? A jaunt down Death Valley, or a spin in the ice swept wastes of a Michigan winter (like Britain only warmer)?

Then you customise and equip the car in the car mart and custom shop, presented as a shop front scene. Using a pointer to buy bits for your motor (no fluffy dice or purple tiger skin seat covers available). Only trouble is, there's a volume/weight limit for each vehicle. Sacrifices have to be made and you have to leave certain mechanical spares behind – decisions which return to haunt you.

It is only after this pleasant diversion (which soon bores) that the game starts on the slippery slope and proceeds to skid down into the mud below. It's time to start the race, an event heralded by the thud of your chin hitting the floor in disappointment. The graphics are blocky, bitty and badly drawn. The well illustrated racer chosen many moons before has obviously been traded in for some beaten up old jalopy of vaguely the same design.

The race screen itself is no more than blocks of unshaded, uninterrupted, uniform colour. The lack of variety is a warning sign for what follows: it may be colourful instantly but it carries on in that fashion, the same colour, seemingly forever.

The track is littered with boulders and other obstacles appropriate to the chosen terrain. The major obstacle to be avoided at all costs, though, is the dreaded kamikaze cactus, which cause you to explode and lose one of your three lives. Evil little critters, these cacti: they move and flicker, making it hard to avoid them at speed. Funny old world: steel car hits boulder and minor damage is caused; steel car hits vegetable matter and the car explodes!

The other hazards are not much more than an inconvenience – rivers which slow you up and occasionally the car getting stuck in water. The track bends but never that sharply, and even when you reach the crest of a hill and the far side is blind the danger is never that great.

The pit repair sections could have been great, but they ain't. When the car breaks down a repair screen shows what's wrong, and what you've got to fix it with. If you have already purchased the right part for the job at the auto-mart you're fine, but if not the only option open is a stop gap repair, chosen by indicating the hammer symbol on the tool shelf (now that's my kind of maintenance). This may not work for long (if at all), and no sooner have you rejoined the race then it's time to return to the repair screen, and you want to use that hammer for something completely different.

Certain parts of this game are terrific, such as the loading tune, which reminded me of the Wizbit theme (hands up all Paul Daniels fans, both of you), and the splashing sound effects for the river. These and other good points are heavily outweighed by the dull and the bad: different situations have no great effect on the driving of the cars; courses are monotonous and feature no great tests of skill, apart from the dodging of obstacles and that rarest of sights, a fellow competitor. Even this simple pleasure is repeatedly interrupted by forced visits to the repair shop. It's a hard game to win, not because of the skill required, but because you have to stifle yawns and defeat your boredom. **TW**

FIRST DAY TARGET SCORE:
Finish one race



● The sight every motorist dreads...



● HOW MUCH??!

SECOND OPINION

"It's unfortunate for 4X4 that it should appear alongside the super WEC Le Mans, because there's just no way it can live with that kind of competition. Still, it has its moments. Only trouble is, there just aren't enough of them." **SC**

THE SCREEN IN GREEN: *no problems*

The Verdict

GRAPHICS **45%**
□ Starts well.
■ Goes downhill.

SONICS **58%**
□ Good fun and splashing fun.

GRAB FACTOR **39%**
■ Little instant appeal.

STAYING POWER ... **31%**
■ Even less lasting appeal.

AA RATING 45%

■ Good in places – but not in enough places.



● The joy of the open road! The sound of a broken exhaust!



● Beware low-flying bridge!

WEC LE MANS

Ocean ● £9.95 cass, £14.95 disk joystick/keys

Twenty four hours of blood, sweat and gears. Grown up boys in grown up toys careering round French public roads at breakneck speed. Fantastically expensive motor cars driven by the racing elite, as both driver and machine are pushed to their limits. This is Le Mans, one of the greatest of motor races and *WEC Le Mans*, an excellent endurance car game, is worthy to share its illustrious name.

The Verdict

GRAPHICS **91%**
- Smooth, steady and speedy.
- Road markings almost hypnotic.

SONICS **56%**
- Limited but functional.

GRAB FACTOR **81%**
- Oh go on, just one more lap.

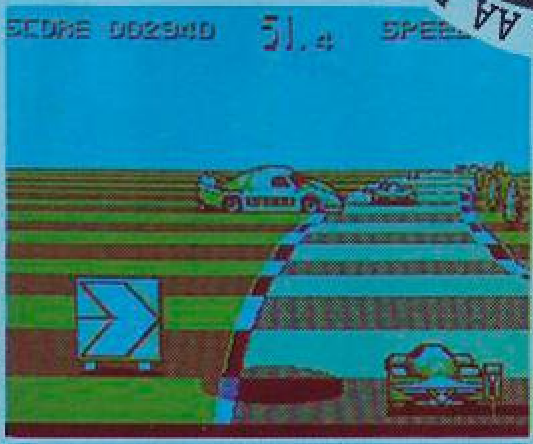
STAYING POWER ... **64%**
- Gets repetitive.
- Gets trickier.

AA RATING 82%
- Great game about a great race.

There are many racing simulations, good, bad and *Out Run (AA30, 37%)*, and without any doubt at all *WEC Le Mans* most definitely falls in the very good class. There's nothing pretentious, no fancy tricks, no chance to wipe out entire armies, no chance to mow down poor defenceless grannies or anything like that. All you get is a car and a race, no more, no less. But – and it's a big but (a double-decker but, in fact) – that's all the game requires to make it both challenging and good fun.

Excellent graphics (reminiscent of what the arcade version of *Out Run* looked like and what its CPC offspring should have) roll the French countryside swiftly past you during the race, accompianied by a low electronic growl for engine noise and a satisfying thump when you break the slipstream of another car during overtaking. There are all the sundry other effects – such as squealing tyres when you've charged into a corner at reckless speeds – one is entitled to expect from a car simulation. All of which is introduced during loading with one of those charming theme tunes, so instantly forgettable they wouldn't even play it at Tesco's.

The race is viewed from just behind your car, the track trailing into the distant horizon. The objective of the game is simply to complete one segment of very faithfully recreated circuit in a set number of seconds. This is not as easy as it may sound because the reality of endurance car racing is captured. Bends not being signposted, tyre-scrub the telltale sign of imminent spin offs and other drivers' unpredictable behaviour, blocking your racing line or suffering blow outs.



● Blood sweat and gears

The car is controlled in a very simple fashion. As has been the case with arcade racing-sims from time to time for ten years now, there' s a grand total of two gears to choose from, fast and very fast – and we're talking 137 mph in first! Direction is just left and right with no degree of lock, your accelerator and brakes (never touch the things myself, I'm much fonder of the barriers) being your forward and backwards control.

Information about speed, time remaining and points scored is displayed at the top of the screen *(points! Who cares about points when there's a chance for some really serious dragracing on the* strip?). The present gear is illustrated by something resembling a piston in the bottom right corner. The pace is suitably frantic, as any joy ride at 200mph should be. The first section contains the glorious Malsanne straight, making it the easiest and the fastest, while the later parts feature more tortuous corners, the track twisting and turning like, like... well, like a twisty turny thing! So completion of even one lap is most definitely an achievement – at least until the layout becomes familiar.

> **SECOND OPINION**
> ***"Phew! My joystick hand still aches after playing this one. It's fast, it's good. In fact it's brilliant! Buy it."*** **SC**
>
> ***GREEN SCREEN:***
> *Fine*

The game is a great test of driving reflexes, with subtle additions such as the drift experienced when cornering too fast, which when used at the right time can be a handy overtaking ploy for those annoying 'Sunday style' drivers who continually leap out of the foreground straight at your front bumper. Although all they cost you is time (the car being seemingly indestructible – I wonder if those nice programmers at Ocean could have a look at my Fiat?), the balletic crashes nearly make failure worthwhile. Well, almost.



● Nice parking!

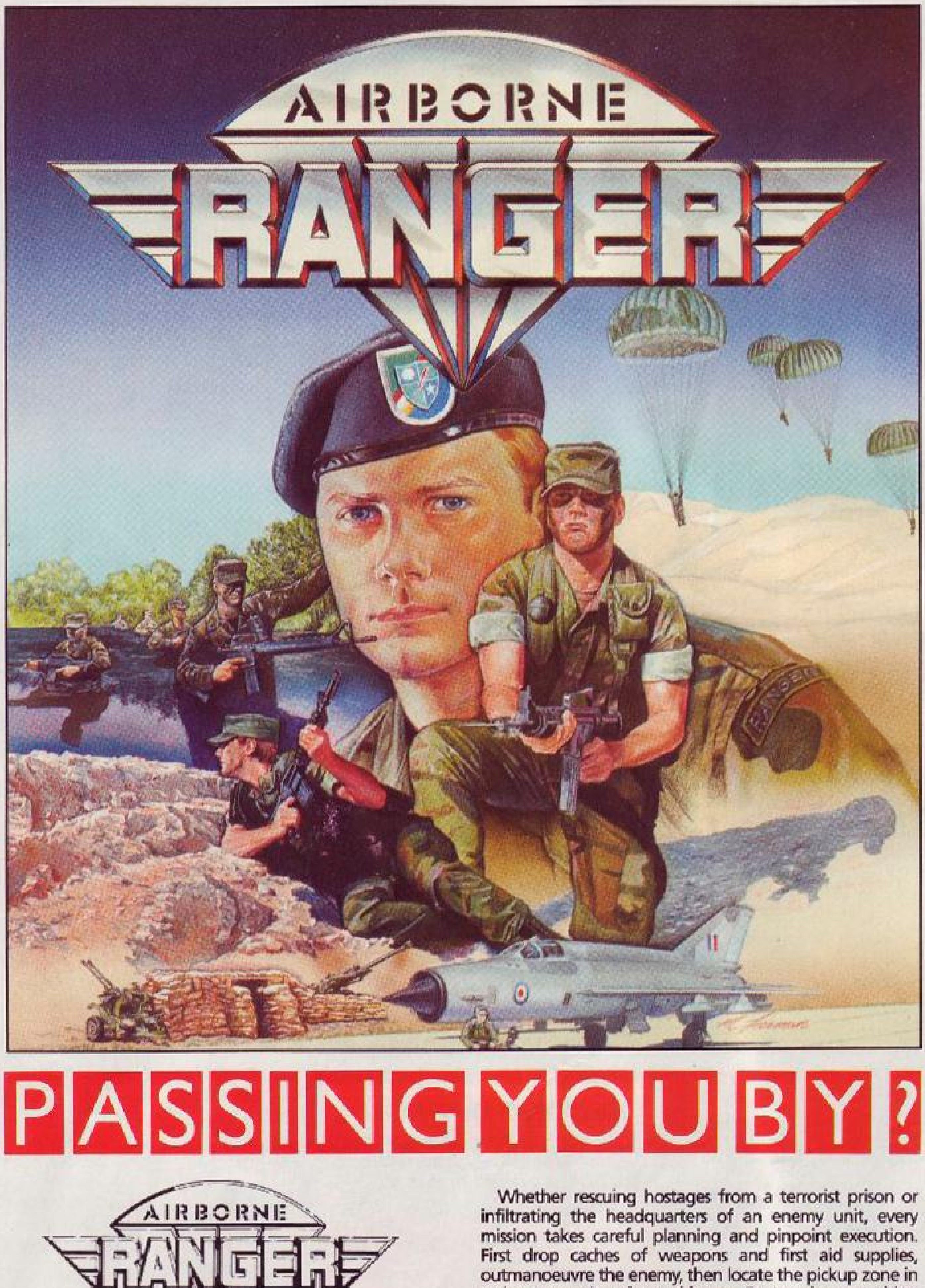
There are, it must be said, some shortcomings in the game design. Le Mans is a 24 hour race and yet no nighttime sections are included. And where is the bad weather? Life would be even more fun (but a lot shorter) if you could tailgate in torrential rain or thick fog. Thirdly, why has the car only got two gears when at least five would add to the realism and the skill level required to win the race? Perhaps most importantly for the game's longevity is the lack of variety. The only apparent change to the scenario after completion of a lap is the appearance of more cars in more awkward places.

Minor gripes like this aside, *WEC Le Mans* is a first-rate race game, with enough tricky little corners and mad (most certainly Italian) drivers to keep you going round in circles for days – which I suppose is what the racing game is all about.

Its release follows hot on the (w)heels of a historic British win at this very event, and it's good to be able to get the feel of the circuit at first(ish) hand. Oh the joys of motoring! The throb of the engine! The wind in your helmet! The car wrapped round a lampost! *(Are you sure that's right? – ed.)* **TJW**

FIRST DAY TARGET SCORE:
Complete two laps

IS REAL EXCITEMENT



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ABSOLUTE BEGINNERS

Basic for beginners with ANDY WILTON

If you always wondered what a GOSUB was, but never dared to ask, then pay attention: you're about to find out!

The programs we've typed in ove the months in *AB* have, among other things, done a great deal of square-drawing. Well,we've still got a few different things to do with squares before we've finished with them. Type this in - it should look familiar if you've been following the series closely:

```
200 MOVE east, north
210 DRAW east+size, north, 1
220 DRAW east+size, north+size, 1
230 DRAW east, north+size, 1
240 DRAW east, north, 1
```

Notice the way the variable names are words, chosen to describe what variables are used for: 'north' is the distance we want the square to be above the bottom of the screen and 'east' the distance in from the screen's left-hand edge, while 'size' is the length of side of the square. Using meaningful words as variable names helps make your programs easy to read and understand.

As it stands, this program isn't any use. We haven't input values for 'east', 'north' and 'size', so nothing happens. We could set these values using a simple assignment, or we could put a FOR-NEXT loop around the lines and make them draw a whole load of squares.

Suppose we want to draw several squares, but in a particular pattern. If the pattern is regular - a straight line, say, or a chessboard - then we can use a FOR-NEXT loop or two, but in this case it isn't. I want our program to form a capital letter A in squares, and there's no simple way to do that with FOR and NEXT.

Of course you could do the whole thing 'longhand' (the Armstrong method, someone calls it) - write out five lines of program to draw the first square, then another five to draw the second and so on until you've formed the 'A'. This is going to take a long time to type in, and it'll be a dull task too.

Square bashing

What you really want to do is use those five lines we've already typed in, over and over again, but to draw squares in different places. Of course, that's exactly what a loop does. Problem is, a loop won't give us enough control over where the squares go.

There is a way in Basic to use the same lines over and over again, without putting them in a loop. It involves two new commands which we'll look at in a little while. These are GOSUB and RETURN - and a third, END, which we'll use righ away.

First we'll get the program running by assigning values to its variables. Type in this new line 190, and run the resulting program:

```
190 east=200:north=100:size=50:CLS
```

As usual, we have a square drawn on the screen. Now add this extra line and try again:

```
235 END
```

Stop here

You'll now see that the fourth line of the square doesn't get drawn. That's because of the END command in line 235. Further commands, even further commands on the same line, are ignored, and the CPC responds as if the program were completed.

Delete lines 190 and 235, and type in the following lines:

```
100 east=250:north=100:size=50
110 CLS:GOSUB 200
120 PRINT "What a surprise - a
   square!"
190 END
250 RETURN
260 PRINT "See what RETURN  does?"
```

When you run this, it draws a square and prints a message. List the program and look at where the END command comes. Now look for the lines that draw the square. Confused?

When line 190 is reached, the CPC stops carrying out the program commands and puts up that 'Ready' prompt. Since the square-drawing lines don't start until line 200 the program is never going to get there, is it? So how come the program draws a square?

The answer lies in that GOSUB command in line 110. It's this command that makes the square. You can prove this easily - just change line 110 to read:

```
110 CLS.
```

and run the program again. No square this time, right?

We now know what the GOSUB command does - but why? Well, GOSUB 200 means 'go and start obeying the program commands from line 200 onwards', and those commands are the ones that draw the square. That's not the whole story, though.

The program may go as instructed to line 200 and start obeying the commands there, but that's not all the GOSUB 200 instructs. It also 'remembers' the line it came from - the line the GOSUB was in, in this case line 110. The program remenbers this because it will go back there as soon as the square-drawing is finished. That's what the RETURN in line 250 tells him.

The program starts obeying the square-drawing commands from line 200 onwards, because the GOSUB's operand tells it to start there. But the RETURN in line 250 marks the end of the out-of-sequence lines, so after line 240 the program hops back to the first command after the GOSUB. In this case that's the PRINT command in line 120. Once the message is printed as instructed, it runs slap into the END in line 190 and stops performing.

Notice that the PRINT in line 260 never gets carried out, because the RETURN send the program back before it gets that far.

A few terms

The lines that the GOSUB make the CPC perform out of sequence – lines 200 to 250 in our program – form what's known as a *subroutine*. . We say that the GOSUB command *calls* the subroutine – that is, instructs the CPC to obey the commands in the subroutine lines before carrying on with the main program. Subroutines normally go after the main program, and are separated from it by an END command - like the one in line 190.

This END command is important. Without it, the CPC may try performing subroutine lines without being told to do so by a GOSUB command. Try deleting line 190 and running the program without it – don't forget to put the GOSUB command back into line 110 if you haven't already. You should get an 'Unexpected RETURN' error message when line 250 is reached for the second time. The program can't RETURN unless it's reached line 250 from a GOSUB, and the second time round he hasn't. This kind of error is called *falling through*. ●

Next month: subroutines that call subroutines!

AA HELPLINE

NEW ENTRIES

Text adventure, CPM. Send formatted disk & SAE for free copy & instructions
K. Bond, 17 Adel Park Gardens, Adel, Leeds LS16 8BN ☎ 0532 672278

Help with programming machine code & Basic
David French, 36 Shakespeare Ave, Rayleigh, SS6 8YA

All the help you could want – printouts, tips, pokes, advice on CPM2.2. Send 20p per help required
Christopher Street (sorry we couldn't print the whole long letter Chris!), 43 Ridgedale Rd, Bolsover Derbyshire S44 6TX ☎ 0246 827135

Pokes, tips & maps for any game you care to mention
Martin Dillon, 176 Coal Clough Lane, Burnley Lancs, BB11 4NJ ☎ Burnley 22197

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Thomas Howlett, Providence Cottage, Kemerton, Nr Tewkesbury GL20 7HP

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James Griffiths, Passby House, Lysonnen Rd, Carmarthen SA33 5DX ☎ 026782 443, 4.15pm-7pm Mon-Fri

Penpal required. 16yo, interests GAC & hacking
Sigurjon Ingolfsson, Digranesvegur 52, 200 Kupavogur, Iceland

Helps and pokes on loadsagames
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Hardware problems incl. DMP 2000 and 'normal' 5.25 inch (not Vortex). Loads of type-ins from German CPC mags. Experience in CP/M+; help with Basic bugs, machine code and millions of games
Jotti A, Rallenstr. 10, D-2500 Oldenburg, W. Germany ☎ 01049 441 52726 (hope you enjoyed your trip to London -ed.)

Paperboy, Terminus, Jail Break, Curse of Sherwood, Nemesis, Transmuter, Hunchback, Johnny Reb, Ghost'n'Goblins, Destructo, 3D boxing & lots more
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Machine code, hacking, writing RSX's and ROM's. Maxam 1.5, Protext, RODOS, DMP2000, DDI-1.
Matt Cawley, 42 Hamilton Ave, Sandycroft, Deeside, Clywyd CH5 2PB

Brunword, printers.
M Catton, 11 Battery Close, Gosport PO12 4PA ☎ 0705 585764

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Steve McClay (no Steve, we haven't forgotten you!), 32 Lycett Rd, Wallasey, Merseyside, L44 2DA

Anyone got an *AA*18 they're willing to part with? Poor old Debbie can't get hold of one – it's out of print. (We did look in the office for one for you, Debbie: no luck.)
Debbie Bainbridge, 16 George St, Ystrad Mynach, Hengoed, Mid-Glamorgan CF8 7BJ

Renegade, FMI&II, Superstuntman & about 8 trillion others
Richard Ruane, 97 Cobden St, Darlington, Co Durham DL1 4JD ☎ 0325 58745

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Ben Taylor, 5 Hope St, Old Glossop, Derbyshire SK13 9SB ☎ 04574 62023 between 4-6.30pm only

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Solving Basic bug, most machine code programs. Enclose listing + description of program –) If poss enclose cassette with program on 464 only. If machine code enclose assembler listing.
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Radzone, Ghosts and Goblins, Knight Tyme, Dragons Lair, Green Beret, Gauntlet, Feud, Starquake (codes), Bounder, Boggit.
David Brooke, 8 Birkby Grove, Bilton Grange, Hull,

Programming in basic (mostly utilities), Protext, Toolkit (Beebugsoft), DMP 2000, Utopia, Printmaster, listings 15p (draft) or 30p (NLQ), Artwork (Kuma), tape only.
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Feeling helpful? Just send your name, address, phone number (say if you don't want it printed) and subjects on which you're offering help to: *Helpline*, Amstrad Action, 4 Queen Street, Bath, BA1 1EJ. Write on a postcard/back of a stuck down envelope and keep it short or you won't get in (or you'll get cut to 'loadsagames').

If you want help contact the appropriate Helpliner – not us. By post include a self-addressed, stamped envelope for the reply – or you won't get one. And phone only in decent hours!

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WORD CLASS LEADERBOARD and ROADRUNNER although "multi-loaders" will completely transfer if you have BSM to asist! All other "multi-loaders" – main file only. BLITZ was also the first to deal with the "NEW" SPEEDLOCK variation and without confining transfers to expanded machines!

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"Best all round basic extension program seen", WACC1 3/88.

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Some of the RSX's employed in FLASH BASIC are almost mini-utilities themselves; here's a few –
MEMORY COMMANDS – |M.EDIT, [editor!], |M.SEARCH, |M.LIST, |M.MOVE
DISC COMMANDS – |D.FORMAT, |D.READ, |D.WRITE, |DEPRO |HEADER
PRINTER COMMANDS – |POSTER, |P.CDUMP, |P.ON, |P.DI, |PSEND
SCREEN/OTHER – |BIG [big chars], |BOX, |COLOUR, |PAUSE, |LINE |SLEEP, |SORT, |MENU, |CALL, |SCR. PUT, |SCR. GET, |KEYS, |INFO

Documentation supplied is very extensive, and the built-in HELP can quickly locate the area of interest and send information to the screen or printer.

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CHEAT MODE

The GARY BARRETT memorial issue

Regular readers know how highly we rated Electronic Arts' *Bard's Tale* when it first appeared – we reviewed it last September and awarded it the coveted *Mastergame*, with a whopping great 90%.

But the test of a game's worth is what its players think of it. And you've loved it! We've been inundated with hints, maps, playing guides and requests – demands even – that we print *Bard's Tale* stuff. So before he left we forced Gary – who spent more time playing the game (in office hours, we might add) than anyone else we know – to tell all...

● The Bard's Tale *is published by Electronic Arts at £8.95 (tape) and £14.95 (disk).*

A little bard told me...

These messages are found throughout Skara Brae in tunnels, tombs and towers. They are supposed to warn or help adventurers – but are more often than not are just plain confusing. Naturally out of context they lose meaning, but a long and careful reading reveals many clues. They could even save your life...

Beyond the lie, before the slip, a passage north, will fake a trip and upward go to evil's grip. Yet not an inch will seem to dip.

The spectre's snare can catch a foe and bind him lest his spirit go.

The one has said that the first man is blessed and the last man damned.

On many levels, several are ancient but the sixth is forever.

The third is passion if you have love and life.

We speak of God, eternal is he, his fifth is almost certainly to be.

Do not scry the first is lie.

The One God's second is surely with.

In all the land, the fourth is and.

A square, a circle and a triangle.

Made of earth, yet without soul, as living statue he is whole.

As a guardian he must walk. The first part of his name means rock.

Beware the sting of the tail (south) of the serpent way.

Thor is the greatest son of Odin.

IRKM DESMET DAEM

Seek the snare behind the scenes.

The ancient witch king yet lives.

Fifteen doors east and thou art there, on souls they feast, in the dark ones lair.

To the tower fly, a mad one die, once lost the eye.

Seek the Mad One's stoney self in Harkyn's domain.

The stone golem has been spoken of twofold.

The spectre snare can draw in the mightiest.

The crystal sword will leave the crystal guardian in many pieces.

There is no exit until the seven words are said.

The hand of time writes and cannot erase.

Know this, that a man called Tarjan though to many to be insane, had through wizardly power proclaimed himself a God in Skara Brae a hundred years ago. His image is locked in stone until made whole again. ●

The Bard's Tale is phenomenally popular, judging by the amount of mail recieved, and the depth of research and effort was quite staggering. Thanks to all who sent in playing hints, tips etc. – especially to *Julian Page* (hope you got some more pentel leads for Christmas), *Mark Rison* (don't panic), *Stuart Whyte, Wayne Goh* and *Steve McClay* (hope you're back on speaking terms with you know who).

CHEAT MODE SPECIAL!

We're planning the world's best ever Incentive round-up of cheats, hints, pokes and maps. So get yours off now – don't worry if you think we'll already have them – to *Cheat Mode Incentive, AA,* 4 Queen St, Bath BA1 1EJ. There'll be surprise prizes for the best contributions – and for others picked out at random, too!

The *AA* good dungeon guide

The map references in the list below are in (North, East) form, measured in one move per unit – so (3,2) means three moves north, by two moves east. The points outlined are some (but by no means all) of the key areas and items it is necessary to locate if wealth, fame and riches are to be yours in Skara Brae.

CELLARS
Sewer entrance = (18,7)

SEWERS
Level 1
Stairs down = (14,17)
Teleport to (16,12) from (6,11)
Level 2
Teleport to (1,20) from (5,17)
Portals = (11,21) and (21,5)
Level 3
Portals = (11,21) and (21,5)
Teleports to (10,14) from (0,13) and to (3,19) from (17,15)
Stairs up to Mangars Courtyard = (16,17)

CATACOMBS
Level 1
Stairs down = (15,16)
Burial Chamber = (10,18)
Stairs up = (0,0)
Level 2
Bashar Kavilors Chamber = (18,11), Treasure Chamber (with resident pet), Sphynx the dragon = (13,6), Living Chamber = (12,10)
Stairs Down = (8,11)
Level 3
Teleport to (13,17) from (21,15), teleport to (10,7) from (0,21)
Witch King = (19,20)

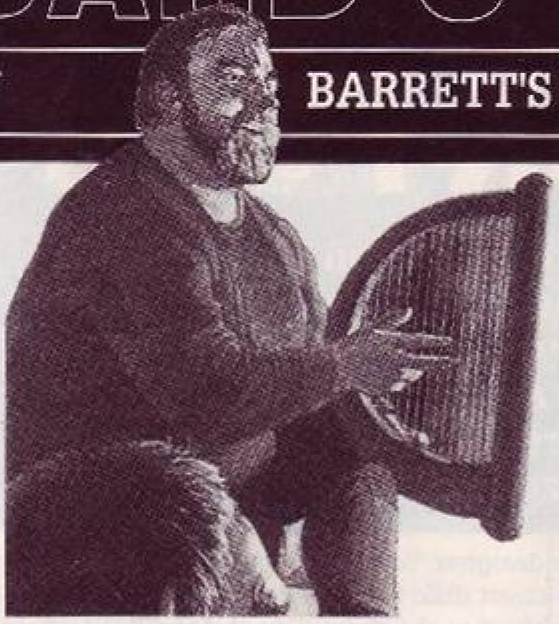
CASTLE
Level 1
Crystal Sword = (1,20)
Stairs up = (19,0)
Jabberwock = (3,22)
Level 2
Portal = (19,19)
Teleport from (5,11) to (3,10)
Teleport from (16,4) to (5,18)
Teleport from (0,1) to (9,10)
Level 3
Throne, = Level 1, (14,9)
400 Hundred beserkers = (5,12)
Teleport from (6,0) to (16,0)
Teleport from (4,6) to (0,0)

KYLEARNS AMBER TOWER
Magic Mouth = (2,12)
Silver Triangle = (20,2)
Crystal Statue = (1,4)
Onyx Key = (13,17)

THE TOWER
Level 1
Coffin = (8,12)
Dragons = (8,21)
Level 3
Master Key ( ) = (12,9)
Secret Stair = (4,10)
Level 4
Teleport to (6,10) from (10,21)
Treasure Trove = (17,0)
Magic Mouth = (21,10)
Mangar and chums = (20,10)

THE BARD'S TALE

Part 4 GARY BARRETT'S final instalment



In this final part of the tourist's guide to Skara Brae you go to see a priest (not Steve Carey, he never finished his priestly training) about a mad god.

As you enter you have a choice between speaking with the priest or leaving the temple – the latter is for cowards or people unready for the dangers ahead. When you do speak with the priest you must tell him the name of the Mad God. A magic mouth told you the name when you were in sewers: Tarjan is Mad God (me Tarjan, you Zane?). Speak the name and you are allowed into the Catacombs, a place filled with the undead.

The eternal darkness

As soon as you enter the catacombs it's time to cast a light-giving spell, if you haven't already got one cast. Greater or Lesser Revelation are better spells to use from now on because they show up secret doors too. Get out your amateur cartography kit and start using it now or you could spend an eternity in the catacombs. As with lower levels of the sewers there are areas of darkness that extinguish your light sources, and if you move around in the dark too much you could spend hours trying to get out again. Always make sure you've got someone capable of casting Scry Sight so that if you do get lost at least you'll know where the exit is relative to you.

Also check each character's inventory for any unwanted items: spare armour or weapons that are non-magical should be disposed of because they're just excess baggage. Ideally you want two or three empty slots for each character so that you can pick up the many items that you're going to find down here. If you have a magical item like the light wand, magic mouth or broom that produces a random magical effect then use it until you have a powerful ally: Thor, the Old Man or a Greater Demon are three of the better ones.



The first level of the catacombs is not too bad, little if any more difficult than the third sewer level. Turn right at the bottom of the stairs and move forwards until you reach a wall. Turn left and enter the second door on your left. Sometimes (not very often, I admit) you encounter a huge horde of skeletons. You'll lose your front three characters for certain and if you aren't careful the whole party will bite the dust. To deal with one large group like this there's a sure way to win, but it relies on you being able to cast Hypnotic Image.

In the first round of combat tell your front row to hack like mad and get one of the back row to cast Hypnotic Image. This spell stops all attacks from the group you select (there's only one in this case) during the next round of combat.

Everyone else on the back should hurl destructive spells like Dragon Breath, Starflare and – even better still – Mind Blade at the skeletons. If you don't wipe them out in the first round (it'll take a while for the combat to end, so go get a drink, have a bath, take a walk around town and then read *Lord of the Rings)* then use the same process next round until you've complete annihilated them.

If you do have this encounter then nip out of the catacombs and go get everyone resurrected. The experience gained by the characters that survived will be very high so a visit to the Review board will be called for.

All in the mind

One thing that is worth mentioning is the power of the Mind Blade spell. Most spells only affect a single group of opponents, but Mind Blade hits everyone. It does 10-40 damage to everyone and if you have two or three characters capable of casting it then very few things are going to live through the first onslaught. This is well worth remembering if you ever encounter four groups of 99 berserkers, because you could only Hypnotic Image three groups at best and one of them is enough to wipe out the party.

Here be dragons

Apart from a few areas of darkness you'll have no further trouble with this level and since there's nothing very special on it you might as well just head for the stairs down which are located at 16 east and 15 north.

Down on level two there are many areas of darkness, and passage through them is often essential. Use the kick method described last month to find your way around. There are only two foes on this level that may cause you some problems, Sphynx and Bashar Kavilov. Sphynx is Bashar's pet dragon (no, I don't know why he named a big reptile after a man's head stuck on a lion's body) and he lives at 6 east and 13 north. A good few hits and a couple of spells are enough to finish him off. Bashar is a powerful sorcerer and should be dealt with quickly or he's likely to take a few party members with him. Now that these two are deceased (or you are) you should head for the stairs at 11 east and 8 north.

Down here is where the real fun starts. The Witch King lives down here and he guards something that you need. To get to him you have to go through a series of teleports. The first is found at 21 east and 0 north.

This will take you to 7 east, 10 north and from there you have to get to a second teleport at 15 east, 21 north. You then emerge at 17 east, 13 north. Turn right and follow the passage around until you enter darkness.

Go north using kick until you reach a wall, turn east, forwards one and then straight south. Move east when you hit the wall and you're out of the darkness. Cast a light spell now because it will stay lit.

Move north until you go through a door and follow the passage around until you come to another door, passing through three traps on the way. Make sure that at least one party member has inventory space for an object. Outside cast healing spells to make everyone better and then go through it.

Witch one did he get?

When you go through the door you'll encounter the Witch King himself. Don't hold anything back in this encounter: hit him with everthing you've got because you want him dead in one combat round. If you don't he'll take an experience level away from anyone he hits.

When he dies you'll find an eye which is used later in Harkyn's castle. Go north and east and you'll be teleported out of the Witch King's domain to the exit stairs and work you way back out of the catacombs.

Dun adventurin'

There comes a time in everyone's life when it's time to settle down. So if you're ever wandering around Skara Brae and see a poor mage in tattered robes begging, be kind to him and give him some money. It might just be a retired guide who's fallen on hard times... *(you're fired – ed.)* ●

BARD'S TALE – THE DISK POKE

Now disk owners of EA's dungeon bash can have mighty parties to make tape owners cry with envy. No longer will monsters scare you, they'll say ** this for a game of soldiers and leg it. All this and more is given you by the disk drive owners' friend, *JULIAN PAGE* of Shrewsbury, to whom a prize is even now rushing...**

There are two programs: a patch and the designer. You'll also need a disk with about 16K free on it: I'll refer to this disk as the cheat disk. First of all type in the patch program and type **SAVE "BARDPTCH.BAS"** to save it to the cheat disk. Put the *Bard's Tale* disk in the drive with side two face up and type **RUN**.

When prompted put the cheat disk in the drive and then press a key to save file **INVEN.BIN** which will be used by the **Designer** program.

Done all that? Now it's time to start on the big listing, the designer itself. Type it in and save it to the cheat disk using the command **SAVE "BARDTALE.BAS"**.

Type **RUN** after you've saved and then get a disk that has a saved game from *The Bard's Tale* on it and use the **Load** option to get a party into memory.

Characters can be made super powerful and they can be equipped with any item. Non-spellcasters can be made into spell casters and you can give them enough experience to take them up to ridiculous levels. And suddenly money is no problem either (if only life were like this!).

As with the tape version of the poke in *AA36*, characters aren't actually boosted up levels: you have to go to the Review Board and take up them levels one by one.

Once you've done all the modifications that you want then just save the party out to a disk, load *Bard's Tale* as normal and load in your all new modified party of adventurers.

```
1 'The Bard's Tale Designer-disk
2 'By Julian Page
3 'Amstrad Action March 89
1Ø GOSUB 244Ø
2Ø DEFINT a-z
3Ø GOSUB 115Ø:BORDER Ø
4Ø GOSUB 131Ø
5Ø GOSUB 118Ø:IF PEEK(&7FFF)<>&FF
   AND a$<>"L" THEN LOCATE 14,1Ø
   :PRINT CHR$(24);"You must load a
   saved game first!";CHR$(24):FOR
   t=1 TO 3ØØØ:NEXT t:LOCATE
14,1Ø:PRINT SPACE$(4Ø):GOTO 5Ø
6Ø ON INSTR("IPLS",A$) GOSUB
   38Ø,8Ø,139Ø,151Ø
7Ø GOTO 3Ø
8Ø FOR t=Ø TO 5:CLS #t:NEXT
t:st=&5CAØ:PRINT#4,"In your party
are:-":PRINT#4
9Ø '** Party stats **
1ØØ PRINT#3,TAB(17)"Party
   Statistics Customiser"
11Ø FOR x=Ø TO 6:IF x>Ø THEN PRINT
   #4,RIGHT$(STR$(x),1);" ) ";
   ELSE PRINT#4,"S ) ";
12Ø FOR y=Ø TO 14:PRINT
   #4,CHR$(PEEK(st+y+&65*x));
13Ø NEXT y:PRINT#4:NEXT x
14Ø LOCATE #4,25,2: PRINT#4,
   CHR$(24);"Hits "
15Ø LOCATE #4,32,2:PRINT#4,"Cond "
16Ø LOCATE #4,39,2:PRINT#4,"SpPts"
17Ø LOCATE #4,46,2:
   PRINT#4,"SpLeft"
18Ø LOCATE #4,54,2: PRINT#4,
   "ExpLvl"
19Ø LOCATE #4,61,2: PRINT#4,
   "SpeLvl";CHR$(24)
2ØØ FOR x=Ø TO 6:
   hits=PEEK(st+&3Ø+x*&65)
   *256+PEEK(st+&31+x*&65): LOCATE
   #4,25,3+x:PRINT #4,hits
21Ø cond=PEEK(st+&32+x*&65)
   *256+PEEK(st+&33+x*&65): LOCATE
   #4,32,3+x:PRINT #4.cond
22Ø sp1=PEEK(st+&34+x*&65)
   *256+PEEK(st+&35+x*&65):
   sp2=PEEK(st+&36+x*&65)*256+
   PEEK(st+&37+x*&65)
23Ø LOCATE #4,39,3+x: PRINT #4,sp1
   :LOCATE #4,46,3+x:PRINT #4,sp2
   :NEXT x
24Ø FOR x=1 TO 6:
   ex=PEEK(st+&65*x+&21): LOCATE
   #4,55,3+x:PRINT #4,ex:FOR y=Ø
   TO 3: spx=PEEK(st+&65*x+&4Ø+y):
   LOCATE #4,62+y,3+x:PRINT #4,
   RIGHT$(STR$(spx),1);:NEXT y,x
25Ø GOTO 161Ø
26Ø '** Print out a character's
   inventory **'
27Ø CLS:PRINT"Look at which char
   acter's inventory (1-6)
   ?":GOSUB 118Ø:PRINT
28Ø IF a$<"1" OR a$>"6" THEN 27Ø
   ELSE CHAR=VAL(a$)
29Ø z=&5CAØ+&5Ø+&65*char
3ØØ FOR t=Ø TO 14:PRINT CHR$
   (PEEK(&5CAØ+char*&65+t));:
   NEXT t:PRINT
31Ø FOR t=Ø TO 7
32Ø PRINT RIGHT$(STR$(t+1),1);")
   ";
33Ø a=PEEK(z+t*2):b=PEEK(z+t*2+1)
34Ø IF b=Ø THEN PRINT: GOTO 36Ø
35Ø CALL &8ØØØ,b:IF a=1 THEN PRINT
   TAB(18);" -- Equipped." ELSE IF
   a=2 THEN PRINT TAB(18);" --
   Unavailable." ELSE PRINT
   TAB(18);" -- Unequipped."
36Ø NEXT t
37Ø RETURN
38Ø '** Print out inventory **
39Ø GOSUB 115Ø
4ØØ FOR x=Ø TO 5:CLS #x:NEXT x
41Ø GOSUB 62Ø:obj=1
42Ø FOR a=Ø TO 9:LOCATE #2,1,a+1:
   PRINT #2, RIGHT$(STR$(a),1)
   ;")";:NEXT a
43Ø PAPER Ø:PEN 1:PAPER #1,1:PEN
   #1,Ø:CLS #1
44Ø fit=9:b$="ECD"+CHR$(224)+
   CHR$(32)+CHR$(13)+"X"
45Ø WINDOW SWAP Ø,1
46Ø FOR x=Ø TO FIT
47Ø CALL &8ØØØ,obj+x
48Ø PRINT:NEXT x
49Ø a$="":WHILE a$="":
   a$=UPPER$(INKEY$):WEND
5ØØ c=INSTR(b$,a$)
51Ø ON c GOTO 81Ø,83Ø,85Ø,95Ø,
   95Ø,95Ø,1Ø8Ø
52Ø IF ASC(a$)<24Ø OR ASC(a$)>241
   THEN 49Ø
53Ø IF ASC(a$)=241 THEN 58Ø
54Ø LOCATE 1,1:PRINT CHR$(11);
55Ø obj=obj-1:IF obj=Ø THEN
   obj=&7F
56Ø CALL &8ØØØ,obj
57Ø GOTO 49Ø
58Ø LOCATE 1,1Ø:PRINT CHR$(1Ø);
59Ø obj=obj+1:IF obj>&7F THEN obj=1
6ØØ CALL &8ØØØ,((obj+fit-1) MOD
   &7F)+1
61Ø GOTO 49Ø
```

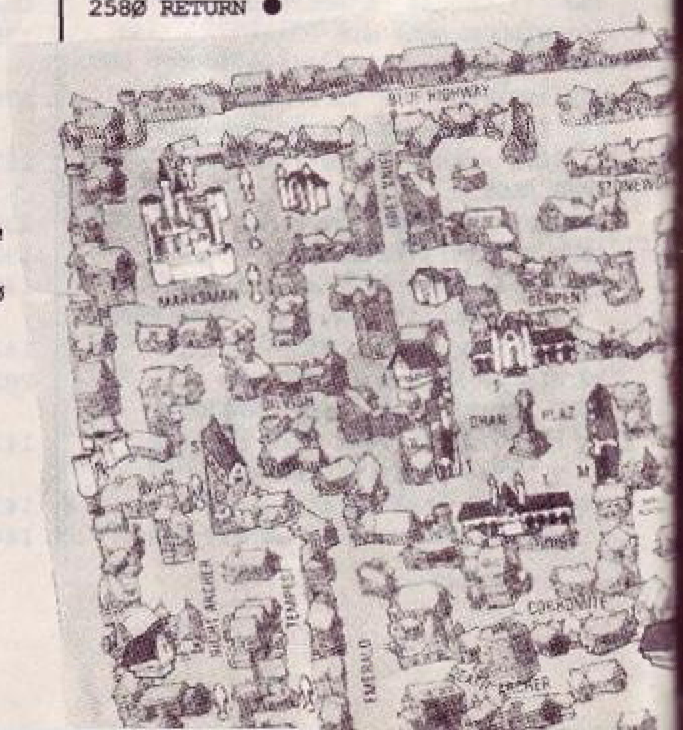
```
1 'Bard Designer patch-disk
2 'By Julian Page
3 'Amstrad Action March 89
1Ø MODE 1:INK Ø,Ø:INK 1,26:PEN 1
2Ø h=HIMEM-1:MEMORY &41FF
3Ø PRINT"Please insert side 2 of The
Bard's Tale."
4Ø PRINT"When ready, press any
   key."
5Ø CALL &BBØ6
6Ø LOAD"editor",&42ØØ
7Ø CLS
8Ø PRINT"Now insert the disc upon
   which the game designer will
   reside, then press a key."
9Ø CALL &BBØ6
1ØØ SAVE"inven",b,&599D,&549
11Ø CLS:PRINT"Now load and run
   the designer."
12Ø MEMORY h:NEW ●
```

```
62Ø '** Get char.inven. to change
63Ø CLS #3:PRINT
#3,TAB(15);"Character Inventory
   Compiler"
64Ø PRINT #Ø,"Which character's
   inventory (1-6) do you wish to
   alter ?"
65Ø GOSUB 118Ø:IF a$<"1" OR a$>"6"
   THEN 65Ø
66Ø char=VAL(a$):CLS #Ø:GOSUB
   29Ø:GOSUB 68Ø
67Ø RETURN
68Ø,'** print in #4 options
69Ø PRINT #5,"    Object Menu"
7ØØ PRINT #4,"OPTIONS:"
71Ø PRINT#4:PRINT#4,"E) Exit
   inventory compiler, and return
   to front end."
72Ø PRINT#4,"C) Choose another
   character to examine."
73Ø PRINT#4,"D) Discard object
   from character's inventory."
74Ø PRINT#4,"<copy> }"
75Ø PRINT#4,"<space>}==- Add
   object from menu to inventory."
76Ø PRINT#4,"<enter>}"
77Ø PRINT#4,"X) Redefine unusable
   object as usable by character."
78Ø PRINT#4,CHR$(24Ø);"
   (cursor.up)   Scroll up object
   menu."
79Ø PRINT#4,CHR$(241);"
   (cursor.down) Scroll down
   object menu."
8ØØ RETURN
81Ø '** Exit inventory compiler
82Ø RETURN
83Ø '** Choose another character
   to examine
84Ø WINDOW SWAP Ø,1:GOTO 4ØØ
85Ø '** Remove object from inven
   tory
86Ø WINDOW SWAP Ø,1
87Ø LOCATE 1,1Ø:PRINT
CHR$(24);"Discard which item (
   Item 1-8, Ø=Everything, else
   exit) ?";CHR$(24)
88Ø GOSUB 118Ø:
   c=INSTR("Ø12345678",a$)
89Ø IF c=Ø THEN GOTO 94Ø
9ØØ d=Ø:f=c-2:IF c=1 THEN FOR d=Ø
   TO 7:f=d
91Ø e=&5CAØ+char*&65+&5Ø+f*2
92Ø POKE e,Ø:POKE e+1,Ø
93Ø IF c=1 THEN NEXT d
94Ø CLS:GOSUB 12ØØ:GOSUB 29Ø:WIN
   DOW SWAP Ø,1:GOTO 49Ø
95Ø '** Choose object from menu **
96Ø WINDOW SWAP Ø,1
97Ø os=&5CAØ+&65*char+&5Ø
98Ø z=99:FOR t=7 TO Ø STEP -1
99Ø IF PEEK(os+1+t*2)=Ø THEN z=t
   'Z+1 =First space free (1-8)
1ØØØ NEXT t
1Ø1Ø IF z<8 THEN GOTO 1Ø3Ø
1Ø2Ø LOCATE 1,1Ø:PRINT CHR$(24);
   "Your character has no avail
   able space!";CHR$(24);"     ":FOR
t=1 TO 19ØØ:NEXT t:CLS:GOSUB 2-
   9Ø:WINDOW SWAP Ø,1:GOTO 49Ø
1Ø3Ø LOCATE 1,1Ø:PRINT CHR$(24);
   "Take which item from menu (Ø-
   9, else exit) ?";CHR$(24)
1Ø4Ø GOSUB 118Ø:IF a$<"Ø" OR
   a$>"9" THEN CLS:GOSUB 29Ø:WIN
   DOW SWAP Ø,1:GOTO 49Ø
1Ø5Ø o=VAL(a$)+obj:POKE os+z*2,Ø:
   POKE os+z*2+1,o
1Ø6Ø CLS:GOSUB 29Ø:WINDOW SWAP
   Ø,1:GOTO 49Ø
1Ø7Ø STOP
1Ø8Ø '** Redefine an object as
   usable by char **
1Ø9Ø WINDOW SWAP Ø,1
11ØØ os=&5CAØ+&65*char+&5Ø
111Ø LOCATE 1,1Ø:PRINT
   CHR$(24);"Redefine which object
   (1-8, else exit) ?";CHR$(24)
112Ø GOSUB 118Ø:IF a$<"1" OR
   a$>"8" THEN GOTO 114Ø
113Ø POKE os+(VAL(a$)-1)*2,Ø
114Ø CLS:GOSUB 29Ø:WINDOW SWAP
   Ø,1:GOTO 49Ø
115Ø MODE 2:INK Ø,Ø:INK 1,26:BOR
   DER Ø:WINDOW 1,61,3,12:WINDOW
   #1,66,8Ø,3,12:WINDOW
   #2,63,64,3,12:WINDOW
   #3,1,61,1,1:WINDOW
   #4,1,8Ø,14,25:WINDOW
   #5,63,8Ø,1,1
116Ø DATA Ø,1,Ø,1,1,1:RESTORE
116Ø:FOR X=Ø TO 5:READ P:PAPER
   #X,P:PEN #X,(1-P):CLS #X:NEXT X
117Ø RETURN
118Ø FOR t=1 TO 5Ø:a$=INKEY$:
   NEXT  t
119Ø WHILE a$="":
   a$=UPPER$(INKEY$):WEND:RETURN
12ØØ '** Routine to compress char
   acter's inventory to normal
   style
121Ø ost=&5CAØ+&65*char+&5Ø
122Ø FOR T=Ø TO 6
123Ø IF PEEK(OST+1+T*2)>Ø THEN 129Ø
124Ø FOR A=T TO 6
125Ø POKE OST+A*2,
   PEEK(OST+(A+1)*2)
126Ø POKE 1+OST+A*2,
   PEEK(OST+(A+1)*2+1)
127Ø NEXT A
128Ø POKE OST+14,Ø:POKE OST+15,Ø
129Ø NEXT T
13ØØ RETURN
131Ø '** Print the main menu
   choice in window Ø
132Ø FOR t=Ø TO 5:CLS #t:NEXT
   t:PRINT#3,"     The Bard's Tale
   Character Designer -- By Julian
   Page"
133Ø PRINT:PRINT TAB(22)"** MAIN
   MENU **"
134Ø PRINT:PRINT TAB(12)"I)
Character's Inventory Customiser
135Ø PRINT TAB(12)"P) Party
   Statistics Customiser
136Ø PRINT TAB(12)"L) Load another
   pre-saved party
137Ø PRINT TAB(12)"S) Save this
   party to disc
138Ø RETURN
139Ø '** Load a pre-saved party
14ØØ CLS:PRINT#3,TAB(2Ø)"Load a
   pre-saved party."
141Ø LOCATE #4,1,6:IF n$<>"" THEN
PRINT #4,"Just press enter to load
   default name of: ";UPPER$(n$)
142Ø LOCATE #4,1,4:PRINT#4,"press
   <TAB> to abort this load"
143Ø N1$=N$
144Ø LOCATE #4,1,2:PRINT#4,"Please
   enter the filename of your
   party (enter to abort)
   ********";:LOCATE #4,59,2:INPUT
   #4,n$
145Ø IF n$="* NULL *" THEN
   N$=N1$:CLS #4:GOTO 4Ø
146Ø IF N$="" AND N1$<>"" THEN
   N$=N1$:PRINT #4,TAB(61);
   CHR$(11);N$ ELSE IF N$="" THEN
   GOTO 144Ø
147Ø LOCATE #4,1,4:PRINT#4,"Insert
   the saved party disc, and press
   a key to load..."
148Ø CALL &BBØ6:LOAD n$,&5C2Ø
149Ø POKE &7FFF,&FF:GOTO 4Ø
15ØØ '** Save a party to disc
151Ø CLS #4:LOCATE #4,1,6:
   PRINT#4,"Just press enter to
   save default name of:
   ";UPPER$(n$)
152Ø LOCATE #4,1,4:PRINT#4,"press
   <TAB> to abort this save"
153Ø LOCATE #4,1,2:PRINT#4,"Please
   enter the name of your party...
   ********";:LOCATE #4,41,2:INPUT
   #4,s$
154Ø IF s$="* NULL *" THEN CLS #4:
   GOTO 4Ø
155Ø IF s$="" THEN s$=n$
156Ø IF LEN(s$)>8 THEN LOCATE
   #4,1,8:PRINT #4,CHR$(7);"Name
   too long! Maximum of 8 charac
   ters":FOR t=1 TO 35ØØ:NEXT t:
   GOTO 151Ø
157Ø LOCATE #4,1,4:PRINT #4,
   SPACE$(24Ø):LOCATE #4,1,4
158Ø PRINT#4,"Insert the saved
   party disc, and press a key to
   save..."
159Ø CALL &BBØ6:CALL &8Ø1B,s$
16ØØ GOTO 4Ø
161Ø CLS:PRINT:PRINT TAB(15);
   CHR$(24);"Please choose from
   the following:";CHR$(24)
162Ø PRINT:PRINT"E) Exit party
   stats, and return to main menu"
163Ø PRINT"H) Alter hit pts and
   condition of a character"
164Ø PRINT"S) Alter spell pts of a
   character"
165Ø PRINT"L) Change level of
   magic of a character"
166Ø PRINT"B) Boost ALL characters
   to ArchMages"
167Ø PRINT"X) Change experience
   points of a character"
168Ø PRINT"G) Alter character's
   amount of gold"
169Ø GOSUB 118Ø:A=
   INSTR("EHSLBXG",A$):IF A=Ø THEN
   169Ø
17ØØ ON A GOTO
   171Ø,172Ø,184Ø,193Ø,2Ø2Ø,
   212Ø,226Ø
171Ø CLS:CLS #4:GOTO 4Ø
172Ø '** Alter hit pts
173Ø LOCATE #4,1,12:PRINT #4,
   "Alter which character's hit
   pts (1-6,S, else abort) ?"
174Ø GOSUB 118Ø:IF a$="" THEN CLS:
   CLS #4:GOTO 4Ø
175Ø IF a$="S" THEN v=Ø:GOSUB
   241Ø:GOTO 177Ø
176Ø GOSUB 239Ø
177Ø LOCATE #4,1,12:INPUT #4,
```

```
  "Enter the new value for hit
  pts (less than 1ØØØØ, else
  exit)";hit
178Ø IF hit=Ø OR hit>9999 THEN
  CLS:CLS #4:GOTO 4Ø
179Ø hit=INT(hit):POKE st+&3Ø,
  hit\256:POKE st+&31,hit MOD 256
18ØØ POKE st+&32,hit\256:POKE
  st+&33,hit MOD 256
181Ø LOCATE #4,25,3+v:PRINT #4,
  hit:LOCATE #4,32,3+v:
  PRINT#4,hit
182Ø LOCATE #4,1,12:PRINT #4,
  SPACE$(78);
183Ø LOCATE #4,68,3+v:PRINT #4,
  SPACE$(12):GOTO 169Ø
184Ø LOCATE #4,1,12:PRINT #4,
  "Alter which character's spell
  pts (1-6, else abort) ?"
185Ø GOSUB 118Ø:IF a$<"1" OR
  a$>"6" THEN GOTO 182Ø
186Ø GOSUB 239Ø
187Ø LOCATE #4,1,12:INPUT#4,"Enter
  the new number of spell pts
  (<1ØØØØ, else exit)";spt
188Ø IF spt<1 OR spt>9999 THEN
  182Ø
189Ø spt=INT(spt):POKE st+&34,
  spt\256:POKE st+&35,spt MOD 256
19ØØ POKE st+&36,spt\256:POKE
  st+&37,spt MOD 256
191Ø LOCATE #4,39,3+v:PRINT#4,
  spt;:PRINT#4,TAB(46)spt
192Ø GOTO 182Ø
193Ø '** Change spell level of one
  char
194Ø LOCATE #4,1,12:PRINT#4,
  "Change which character's magic
  levels (1-6) ?":GOSUB 118Ø
195Ø GOSUB 239Ø
196Ø LOCATE #4,1,11:
  PRINT#4,"Enter,as a 4 digit
  number,the levels
  (sor/con/mag/wiz) in that order
  e.g. 7777 The highest level in
  each class is 7, the lowest is
  Ø... ****":LOCATE #4,58,12:
  INPUT #4,1$
197Ø IF 1$="" THEN 2Ø1Ø ELSE IF
  LEN(1$)<>4 THEN PRINT CHR$(7);
  :GOTO 196Ø
198Ø FOR w=Ø TO 3:z=
  VAL(MID$(1$,w+1,1)):IF z>7 OR
  z<Ø THEN PRINT CHR$(7);:GOTO
  196Ø
199Ø POKE st+&4Ø+w,z:NEXT w
2ØØØ LOCATE #4,62,3+v:PRINT#4,
  1$;SPACE$(13)
2Ø1Ø LOCATE #4,1,11:PRINT #4,
  SPACE$(79):GOTO 182Ø
2Ø2Ø '** Boost all chars to magic
  level 7777 (ArchMage)
2Ø3Ø LOCATE #4,1,11:PRINT#4,"This
  will turn all 6 characters into
  ArchMages...Press X to exit"
2Ø4Ø PRINT#4,"For non-magic users
  to cast spells, they must be
  given spell pts (S)"
2Ø5Ø GOSUB 118Ø:IF a$="X" THEN
  2Ø1Ø
2Ø6Ø FOR v=1 TO 6:GOSUB 239Ø
2Ø7Ø FOR w=Ø TO 3
2Ø8Ø POKE st+&4Ø+w,7:NEXT w
2Ø9Ø LOCATE #4,62,3+v:
  PRINT#4,"7777";SPACE$(13)
21ØØ NEXT v
211Ø GOTO 2Ø1Ø
212Ø '** Change experience level
  of a character
213Ø LOCATE #4,1,11:
  PRINT#4,"Change which charac
  ter's experience (1-6, else
  exit) ?":GOSUB 118Ø
214Ø IF a$<"1" OR a$>"6" THEN 2Ø1Ø
215Ø GOSUB 239Ø
216Ø LOCATE #4,1,11:
  PRINT#4,"Character";v;" cur
  rently has gained ";
217Ø c$="":FOR w=Ø TO 1Ø:
  c$=c$+RIGHT$(STR$(
PEEK(st+&15+w)),1):NEXT w:PRINT
  #4,VAL(c$);
218Ø PRINT#4," experience
  points.":LOCATE #4,1,12
219Ø PRINT#4,"Now enter the new
  number, no larger than
  99999999999...
  ***********":LOCATE #4,57,12:
  INPUT #4,num$
22ØØ IF INSTR(NUM$,",")>Ø THEN
  LOCATE #4,1,11:
  PRINT#4,CHR$(7);"Please enter
```



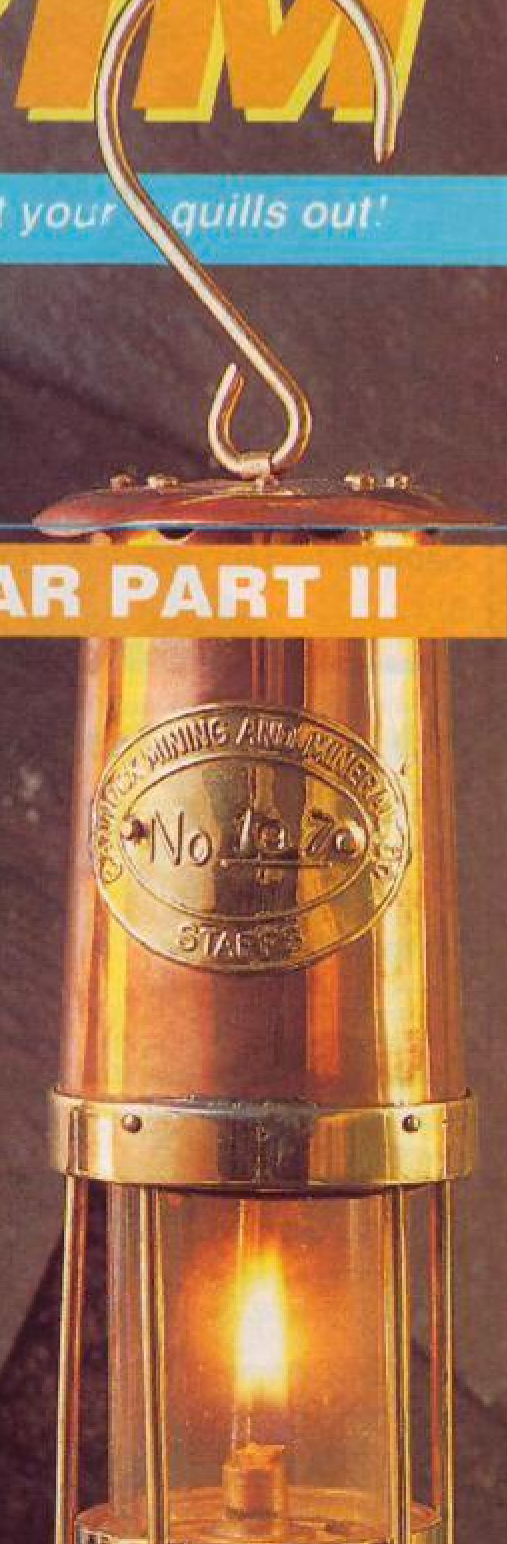
```
  the number without any commas
  or dashes, just the numbers
  !":GOTO 219Ø
221Ø IF num$="" THEN GOTO 2Ø1Ø
222Ø IF VAL(num$)>1E+11 THEN
  LOCATE #4,1,11: PRINT#4,
  CHR$(7);"That number is far too
  large...Please re-enter a
  smaller number, max 11 dig
  its":GOTO 219Ø
223Ø num$=STRING$(11-LEN(num$)
  ,"Ø")+num$
224Ø FOR w=Ø TO 1Ø:POKE st+w+&15,
  VAL(MID$(num$,w+1,1)):NEXT w
225Ø GOTO 2Ø1Ø
226Ø '** Change gold levels
227Ø LOCATE #4,1,11:
  PRINT#4,"Change which charac
  ter's amount of gold (1-6, else
  exit ?":GOSUB 118Ø
228Ø IF a$<"1" OR a$>"6" THEN 2Ø1Ø
229Ø GOSUB 239Ø
23ØØ LOCATE #4,1,11:
  PRINT#4,"Character";v;"current
  ly has gained ";
231Ø d$="":FOR w=Ø TO 1Ø:
  d$=d$+RIGHT$(STR$(PEEK(
  st+&25+w)),1):NEXT
  w:PRINT#4,VAL(d$);
232Ø PRINT#4,"pieces of gold.
  ":LOCATE #4,1,12
233Ø PRINT#4,"Now enter the new
  figure, no larger than
  99999999999...
  ***********":LOCATE
  #4,57,12:INPUT #4,cas$
234Ø IF VAL(cas$)>1E+11 THEN
  LOCATE #4,1,11:
  PRINT#4,CHR$(7);"That number is
  far too large...Please re-enter
  a smaller number, max 11 dig
  its":GOTO 219Ø
235Ø cas$=STRING$(11-LEN(cas$),
  "Ø")+cas$
236Ø FOR w=Ø TO 1Ø:POKE
  st+w+&25,
  VAL(MID$(cas$,w+1,1)):NEXT w
237Ø GOTO 2Ø1Ø
238Ø END
239Ø '** Figure out right position
  in code for character
24ØØ IF a$>"Ø" AND a$<"7" THEN
  v=VAL(a$)
241Ø st=&5CAØ+&65*v
242Ø LOCATE #4,68,3+v:
  PRINT#4,"<<<<<<<<<<<<"
243Ø RETURN
244Ø DATA
DD,5E,ØØ,21,ØØ,9Ø,Ø1,97,Ø5,3E,
  FE,ED
245Ø DATA
B1,CØ,1D,2Ø,F8,7E,FE,FE,C8,CD,
  5A,BB
246Ø DATA 23,18,F6
247Ø DATA
DD,6E,ØØ,DD,66,Ø1,46,23,5E,23,
  56,EB
248Ø DATA
11,ØØ,9Ø,CD,8C,BC,E5,11,1C,ØØ,
  19,Ø6
249Ø DATA
1Ø,7Ø,23,1Ø,FC,E1,21,2Ø,5C,11,
  44,Ø3
25ØØ DATA
Ø1,ØØ,ØØ,3E,Ø3,CD,98,BC,C3,8F,
  BC,XX
251Ø RESTORE 244Ø
252Ø x=&8ØØØ:IF PEEK(x+1)=&5E THEN
  RETURN
253Ø READ x$:IF x$="XX" THEN 256Ø
254Ø POKE x,VAL("&"+x$):x=x+1
255Ø GOTO 253Ø
256Ø MEMORY &5C1F:
  LOAD"INVEN",&9ØØØ
257Ø KEY DEF 68,1,129:KEY 129,"*
  NULL *"+CHR$(13)
258Ø RETURN ●
```



PILGRIM

Will YOU be Adventurer of the Year 1989? Get your quills out!

This month sees the second and final part of the great Amstrad Adventurer of the Year Competition; the final part of the Paladin's Guide to *Gnome Ranger;* and a bumper Clue Pot for those who be well and truly STUCK

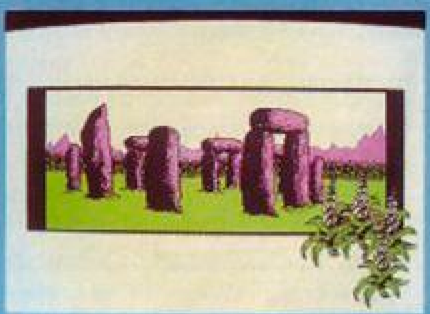


ADVENTURER OF THE YEAR PART II

Here goes with the final part of our Adventurer of the Year 1989 competition. Remember: to complete the entry form you'll need a copy of last month's issue. The remainder of the questions are printed below.

Don't worry if you can't answer all the questions: not many people will be able to do that! And of those that do, few if any are likely to get them all right! So it's worth entering even if you can only answer a few, especially if you're sure your answers are correct. Here goes!

1



2



3



7. Spot the shot...
Look carefully at these three screenshots, then match each with the correct game:

- *Warlord*
- *Tomb of Kuslak*
- *Souls of Darkon*

3. Down to the Nitty Gritty...
   a) What do the letters NPC stand for?
   b) Which command is abbreviated to L?
   c) How do you solve a maze in which all the location descriptions are the same?
   d)How do you solve one in which all location descriptions are slightly different?

For extra points in this section:
   e) Name a game that has a maze as in (c) above.
   f) Name a game that has a maze as in (d) above.

4. Knowledge of Adventures in the World at Large...
   a) What do the letters RPG stand for?
   b) Which of the following games is/are NOT RPG influenced:
   (i)Bards Tale (ii) Wizardry (iii) Mindshadow (iv) Ultima IV.
   c) What machine did Scott Adams program his first game on?
   d) Who wrote the original version of Collossal Adventure? and...
   e)...in which language was it written?
   f) What does MUD stand for?
   g) Where would you log onto SHADES?

5. Solving the puzzle...
   a) How many objects do you need to get the Babel Fish?
   b) What is the password for the Mad God's Temple?
   c) How do you get past Tarzan?
   d) What's the ideal setting for Chinese food?
   e) What objects do you need to raise the boards?
   f) What do you give to the woman in Rick's Cafe?

6) Which was the first...
   a) Level 9 game to have graphics?
   b) RPG-based game for the Amstrad CPC computers?
   c) Infocom game?
   d) Magnetic Scrolls game?
   e) Take-off of the Hobbit?
   f) Game with interactive characters released by a UK software house?
   g) Adventure game with graphics released by a UK software house?
   And for extra points in this section:
   h) Who programmed 6(c)?

7) *See screen shots on left*

THE AAY 1989 TROPHY

This – and the software prize (see overleaf) – is what you're fighting for! A replica of a miner's lamp, commissioned from lighting specialists Christopher Wray. This fully operational adventurer's lamp comes on its own podium (not shown), engraved with the name of the winner. It is guaranteed to light up the darkest dungeon and not to blow out however hard that Balrog flaps its jowel-tappers. Most important of all, it does NOT ignite Trolls' Breath. It's yours to keep on display for a whole year until a new Adventurer of the Year is appointed!

Now all *(all!)* you need to do is to fill in as many answers as you can to this month's and last month's questions on the form below. Before you do, check out the full list of prizes – and the rules – on the page opposite.

PS One more thing. Good luck!

YE ENTRIE FORM

Using your skill and knowledge, enter the answers to as many questions as possible in the spaces provided. Then enter your name, address, and telephone number. Finally, complete the tie-breaker in less than 25 words. Then post this form (or a photocopy) to:

Amstrad Adventurer of the Year Competition
Amstrad Action
4 Queen Street
BATH
BA1 1EJ

Closing date for entries is April 5th 1989.

Section 1 (questions in last month's issue)

a) ......
b) ......
c) ......
d) ......
e) ......
f) ......
g) ......
h) ......
i) ......
j) ......

Section 2 (questions in last month's issue)

1) ......
2) ......
3) ......
4) ......
5) ......
6) ......
7) ......
8) ......
9) ......
10) ......
a) ......
b) ......
c) ......
d) ......
e) ......
f) ......
g) ......
h) ......
i) ......
j) ......

Section 3.

a) ......
b) ......
c) ......
d) ......
e) ......
f) ......

Section 4

a) ......
b) ......
c) ......
d) ......
e) ......
f) ......
g) ......

Section 5

a) ......
b) ......
c) ......
d) ......
e) ......
f) ......

Section 6

a) ......
b) ......
c) ......
d) ......
e) ......
f) ......
g) ......
h) ......

Section 7

a) ......
b) ......
c) ......

Section 8: The Tie Breaker

Thorin finally stopped singing about gold because ......

Your name ......
Address ......

Phone (if you have one) ......

The prizes...

There will be three winners, one taking first prize and the title Amstrad Adventurer of the Year plus two runners-up.

THE FIRST PRIZE...

The Amstrad Adventurer of the Year will be invited to attend a special ceremony in London (with travel expenses paid) where he/she will be presented with the AAY89 Trophy by Anita Sinclair of Magnetic Scrolls. In addition, the prizewinner will receive the ENTIRE collection of state-of-the-art Magnetic Scrolls software, plus every MS release for the Amstrad CPC range over the coming year - completely free of charge. And you get a fabulous lunch with the Infamous Pilgrim as well, who will offer the winner the ultimate reward...contributing to this column. So...you get not only fortune, but fame AND food!

Magnetic Scrolls' game *The Pawn* was recently voted most popular adventure of all time in a poll of *ACE (never heard of it – ed.)* adventure readers. Anita Sinclair will be presenting the Trophy to the winner and showing him/her round the Magnetic Scrolls programming hot-house. Other readers can find out all about it when we report in detail on the event – including letting you all in on some of MS' programming 'secrets'!

AND FOR THE RUNNERS-UP...

The two runners up will each receive Rainbird software tokens to the value of £30 each which they can redeem for any Rainbird title(s) they choose.

(Note: Magnetic Scrolls software is compatible with the 6128 only. In the event that the first prizewinner does not own a 6128, we will offer a £100 Rainbird software token instead).



The rules

1. Employees of Future Publishing, Telecomsoft, Magnetic Scrolls, and any company involved in the sale and distribution of *Amstrad Action* magazine are not eligible for entry.
2. Closing date April 5th 1989.
3. The decision of the judges is final and no correspondence will be entered into.
4. Only one entry per household.
5. No purchase of *Amstrad Action* magazine is necessary and photocopies of the form are acceptable.
6. The first, second, and third prizes will be awarded to the three entries drawn from those received prior to the closing date and featuring the greatest number of correct answers. In the event of a draw, the prizes will be decided on the humour and originality of the tiebreakers as decided by the judges.

The Players' Guide to *Gnome Ranger* Part 4

by The Paladin

Once you've returned the child to its mopther, you can then command her and her people. Leave everything in the whitehall, then take the queen and anyone else you can find with you south-west to the river canyoun.

- *At the north end of the canryon is an icefall. Get your friends to push the icefall into the canyoun. It's possible to stop the water's flow with one person's help, but the more the merrier, eh what?*
- Quickly enter the outlet canyon and remove the thing obstucting the water's flow (the log), then get the gem and carry it back to the whitehall. Now get someone to carry the ruby, pick up the rest of your belongings and take the queen north. The queen will make friends with the now pacified Fireking and with this new spirit of detente take your leave.
- *With someone's help (i.e. the someone carrying the ruby), go to the garden. Leave him or her by the treetrunk SW of the garden. Tell this same personage to push it into the river after 7 turns.*
- Now go to the garden and give the Gnome your diamond. In the garden, get the diamond which the gnome took and collect the final gem. Wait until you see the treetrunk floating down the river and stand on it.
- *Ahhhhr! Yer nearly there, lassie! While standing upon the treetrunk, and before you reach the lake, JUMP north onto the bank. Then return to the gate. All you have to do now is go north and GO HOME!*

The Lords and Ladies of Adventure

So you're stuck. You could of course always wait until next month's bumper two page Clue Pot. Alternatively you could try one of the glorious Lords and Ladies below. And don't forget – other people need YOUR help. Write to: *Pilgrim (Lords and Ladies), Amstrad Action*, 4 Queen Street, Bath, BA1 1EJ, stating which games you've solved. Go on – be famous!

● Forest at Worlds End, Gremlins, Heroes of Karn, Midnshadow, Message from Andromeda, Never Ending Story, Red Hawk, Spy Trek, Seabase Delta, SubSunk, Warlord, Spellbound, Knight Tyme, Storm Bringer.
Robert Weir, 87 Burnside Rd, Gorebridge, Midlothian, EH23 4ET

● Beerhunter, Heroes of Karn, Never Ending Story, plus limited help on Redhawk and Rigels Revenge.
Andrew MacDonald, Brookhouse Farm, Eccleshall, Staffs, ST21 6NE

Kentilla, The Big Sleaze, Hobbit, Forest at the Worlds End
David Liddell, 91 Orbiston Drive, Bellshill, ML4 2LX

● Never Ending Story, The Hobbit, The Boggit, Warlord, Enchanter, Forest at Worlds End, Marsport, Spellbound, Knight Tyme, Souls of Darkon, Return to Eden, Emerald Isle, Jewels of Babylon, Fantasia Diamond, Seabase Delta, Adventureland, Return to Eden.
Tim Gurney, Lords Hill, Shamley Green, Guildford, Surrey, GU5 0TJ

● Hobbit, Lord of the Rings, Knight Orc Part 1, Pawn, Guild of Thieves, Jinxter.
Thomas Sinclair, 265 Calder Street, Govanhill, Glasgow G42 7QG

● Forest at Worlds End, Gremlins, Message from Andromeda, Bored of the the Rings, Jewels of Babylon, Warlord, Heroes of Karn, Never Ending Story, Fantasia Diamond, Robin of Sherwood, Adventure Quest, Dungeon Adventure, Terrormolinos, Emerald Isle.
Alistair McBain, 52 Fox Covert Avenue, Corstorphine, Edinburgh

!! NOW SPEEDTRANS PLUS HAS EVEN MORE TO OFFER !!

SPEEDTRANS PLUS2

For CPC6128 (or 464/664 with DK Tronics 64K (or larger) Memory)
Once the programs has been transferred to disc IT WILL RUN ON ANY CPC.

SPEEDTRANS PLUS2 now handles the VERY LATEST Speedlock types automatically. No need to hold a key down at anytime during loading. SPEEDTRANS PLUS2 also saves 99% of opening screens and saves them in their full colours

FULLY AUTOMATIC – JUST ONE KEYPRESS * ONLY ONE PROGRAM TO RUN WHICH FINDS THE SPEEDLOCK TYPE AUTOMATICALLY * WILL TRANSFER ORIGINAL AND MANY OF TODAYS SPEEDLOCK PROGRAMS * NO FIDDLING OR MEDDLING – WRITTEN WITH THE AMATEUR IN MIND * AUTOMATIC DISC FILENAMES * NO WASTED DISC SPACE – SAVES THE CORRECT AMOUNT OF GAME CODE * SAVES 99% OF OPENING SCREENS * SCREENS SAVED IN THEIR CORRECT COLOURS * COMPRESSES SCREEN CODE TO SAVE EVEN MORE DISC SPACE * FASTER LOADING TIMES FROM DISC BECAUSE OF SHORTER FILE LENGTHS
SPEEDTRANS PLUS2 transfers over 200 programs to Disc, some of the latest it will do are MADBALLS, FREDDY HARDEST (both games) BASKET MASTER, MATCHDAY II, PHANTOM CLUB, GRYZOR (main program), SUPER HANG ON.

These latest Speedlock types can be identified by the whole screen flashing with horizontal bands of colour immediately after the first file has loaded. Do remember that **SPEEDTRANS PLUS2** does not save all the memory in the hope of having saved all the game. It saves exactly the right length of code. All screens are saved in compressed form – some as little as 4K (Basket Master) - thus saving even more disc space.
SPEEDTRANS PLUS2 is the most sophisticated Tape-to-Disc transfer utility for SPEEDLOCK protected programs ever published. It will certainly transfer more games than any other Speedlock transfer program on the market and with much greater ease. Other transfer programs require you to know how long the game code is so that you may run an alternative program for the long games which does not save the loading screen. This is done because they do not make use of the extra memory available on the CPC 6128 or from the use of an extra **RAMPACK** (DK Tronics 64K or greater.) This program is highly intelligent in that it first reads the loader from the tape and establishes which type of protection is in use from 6 alternatives. At the end of the load it then finds out how long the code is and if it is too long to be saved to one file it will move the excess code into the banked memory and save the game in two parts and write the appropriate loader program. The screen will also be moved into a bank and compressed before saving. This can mean screen files as small as 4k (Basket Master) depending on mode and content. All this adds up to a lot less disc space being used than with other transfer programs and you will nearly always get the loading screen saved. The exception to this is when there is no loading screen (as in SCRABBLE) or when the screen is blanked out and more code is loaded into the screen memory, as in BMX SIMULATOR and MADBALLS for example. Try getting a screen with Multiface or any other imager. These imagers are only capable of saving what you have in memory at the time the button is pressed. What happens in multi part games? you have to press the button for each part thus wasting precious disc space. They also save far too much code and therefore waste even more space and saving too much code means longer loading times from disc. Programmers are now checking to see if you have an imager plugged in and if you have the program will not load. Imagers also have to be in place before you can reload your program and saved programs can only be reloaded in to the machine in which they are saved. **SPEEDTRANS PLUS2** creates totally stand-alone files and if you have another CPC even without extra memory they will run prefectly. It also displays the saving name on screen at the start of the load with all except the very latest games. In all cases the disc saving name is displayed while the save is carried out. To run the transferred game just RUN this name. Another intelligent feature of **SPEEDTRANS2** is that the very first thing it does is to find out which drive it is in. This means that if you have a two drive system you may run the program from drive B by typing RUN "B:DISC" or :B:RUN"DISC. However the saving will ALWAYS be to DRIVE A so with a single drive you must change the disc when prompted on screen.

DISC:- UK £14.99 – EUROPE £16.25 – REST OF WORLD £17.00
Upgrade your SPEEDTRANS PLUS -send your disc together with: **UK £2.00 – EUROPE £3.25 – REST OF WORLD £4.00**
Upgrade your SPEEDTRANS TAPE send your tape together with: **UK £12.00 – EUROPE £13.25 – REST OF WORLD £14.00**

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Program	UK – Disc	Eprom	Europe – Disc	Eprom	Rest of World – Disc	Eprom
PROTEXT OFFICE ✱NEW✱	27.00	N/A	28.25	N/A	29.00	N/A
PROTEXT FILER ✱NEW✱	19.00	N/A	20.25	N/A	21.00	N/A
PROTEXT	20.00	30.00	21.25	31.25	22.00	32.00
PROSPELL	19.00	27.00	20.25	28.25	21.00	29.00
PROMERGE (ROM=PROMERGE PLUS)	19.00	27.00	20.25	28.25	21.00	29.00
MAXAM ✱THE BEST!✱	20.00	31.00	21.25	32.25	22.00	33.00
MAXAM 1 1/2 ✱NEW✱	N/A	23.00	N/A	24.25	N/A	25.00
UTOPIA	N/A	23.00	N/A	24.25	N/A	25.00

ROMBO ROMBOARD UK – £28.00 EUROPE – £30.00 REST OF THE WORLD – £31.00

DMP 2000/2160/3000/3160

The printer buffer presently in the DMP 200/3000 series is a 2K RAM. Most of this RAM is used by the printer's operating system leaving an average 1/2K as buffer space. Our upgrade kit contains a new static RAM chip which will increase the printer buffer by 6K (about 4 pages of text). This upgrade allows all Download Characters to be re-defined allowing the user to design special characters for use with scientific and other programs. The kit is supplied with full pictorial instructions to allow the amateur to carry out his own modification (the DMP2160 takes about 7 minutes). If you don't think you are up to it your local TV shop can do the job in approximately 15 minutes
UK £12.50 – EUROPE £13.75 – R. of W. £14.50

FIRETRANS

This utility will transfer a number of FIREBIRD programs from tape to disc automatically including most opening screens in full colour. FIRETRANS will work equally well from tape but will be more convenient to use if converted to disc with SAMSON/Transmat. It will transfer WILLOW PATTERN, RUNESTONE, CHIMERA, GUNSTAR, PARAROLA, REALM, SPIKY HAROLD, BOOTY, DON'T PANIC, GUNFRIGHT, STARGLIDER, NINJA MASTER, HELICOPTER, and some version of THRUST, HARVEY HEADBANGER and BOMBSCARE.
TAPE:- UK £5.00 – EUROPE £6.25 R. of W. £7.00
DISC:- UK £8.50 – EUROPE £9.75 – R. of W. £10.50

NEW COMPACTOR NEW

COMPACTOR will allow you to load a standard 17K screen, set the mode, border and ink colours and then save it as a compressed screen containing its own mode and ink colour information. Most screens compact down to an average of 9K which is an enormous saving on disc space. Loading time of compressed screens is also proportionately reduced.
TAPE:- UK £5.00 – EUROPE £6.25 R. of W. £7.00
DISC:- UK £8.50 – EUROPE £9.75 – R. of W. £10.50

TRANSIT

TRANSIT is a disc-to-disc file copier which handles file up to 40K in length in one pass. It will copy from drives A-A, A-B, B-B and B-A making an ideal utility for use with 5 1/4" second drive.

TAPE:- UK £4.50 – EUROPE £5.25 – R. of W. £6.50
DISC:- UK £8.00 – EUROPE £9.25 – R. of W. £10.00

UTILITY DISC No. 1

This utility disc contains 5 programs, all menu driven. They are SAMSON, TRANSIT, QCLONE, VIEWTEXT and the fast disc FORMATTER.

DISC:- UK £15.50 – EUROPE £16.75 – R. of W. £17.50
ROM:- UK £17.25 – EUROPE £18.50 – R. of W. £19.25

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ONLY A FEW REMAINING

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NEW NIRVANA NEW

Have you tried backing up your original expensive disc software and failed? Use NIRVANA before its too late! NIRVANA (meaning enlightenment) is an extremely powerful disc handliing utility which has the following features: Disc to disc back-up copier which will handle most of the commercially protected discs available today. File copier for individual files. Disc formatter, much easier to use than CPM. Change file attributes. Erase files. Change filenames. Will handle all disc drive combinations

DISC:- UK £14.99 – EUROPE £16.25 – R. of W. £17.00

NEW SHAREPLAY NEW

THE STOCK MARKET SIMULATION
(All CPC's)

This is a serious educational program for 1 to 6 players and provides all the enjoyment of playing the stockmarket without any risk of personal bankruptcy!! Each player can buy and sell shares and the target is the first to reach £1,000,000. The program includes a stockholding portfolio listing the shares purchased, their number, cost and market value. Bank balances are also shown. Graphical representation of market fluctuations are given in the form of a bar graph. Also included is a high score table. Scores are automatically saved at the end of each session.

DISC:- UK £12.00 – EUROPE £13.25 – R. of W. £14.00

NEW WORDSEEK NEW

THE WORDSEARCH PROGRAM
(All CPC's)

This educational program will tax even the most agile mind. The aim is to find the hidden words in a 15 by 15 puzzle within a set time limit of 30 seconds. The time limit is extended for every correct letter of the current word found. You may create your own puzzle consisting of up to 10 words which can be saved to disc and used at any time. You may only retain one puzzle at a time but if you choose not to use your own puzzle then the program will randomly select one from the library of 50 on the disc. All of the puzzles in the library are made up of 10 words each consisting of 1x8 letter, 1x7 letter, 2x6 letter, 3x5 letter, 2x4 letter and 1x3 letter words. This ensures equal difficulty regardless which one is randomly loaded. The program contains a print option (for Epson compatible printers) allowing a hard copy to be made of any puzzle created. Keyboard/Joystick options are also available.

DISC ONLY – U.K. £12.00 – EUROPE £13.25
REST OF THE WORLD £14.00

NEW TUNESMITH NEW

TUNESMITH is a simple to use sound utility which allows you to use the keyboard to play and record your tunes. No knowledge of music or Amstrad sound commands is required all you need to be able to do is whistle the tune you play or record. The octave and period of notes is variable and the program includes synthesizer and vibrato effects. **TUNESMITH** will save any tune as a basic file which can be RUN, CHAINED or MERGED into your own program.

DISC:- UK £12.00 – EUROPE £13.25 R. of W. £14.00

SAMSON

SAMSON has been developed by us to transfer not only the normal programs but also many of todays where the code is much longer. **SAMSON** differs in many ways from other Tape-to-Disc utilities, the main differences being: * SAMSON retains original file suffixes (SAMSON.SCN will be saved as SAMSON.SCN) * Improved file relocation method * Elaborate Tape-read/Disc-write system which reduces Tape Motor, Slave Replay and Disc Drive Motor wear substantially. * A large reduction in tape transfer time is also achieved in all but a few cases * NEW "SPLIT" option for todays longer games (we will be using this option in future routines) * All file information is displayed on screen and can be echoed to your printer if needed. SAMSON also transfer itself to disc.

TAPE:- UK £7.50 – EUROPE £8.75 – R. of W. £9.50
DISC:- UK £11.50 – EUROPE £12.75 – R. of W. £13.50

CHARACTER DESIGNER

(All CPC's)

- **REDEFINE YOUR PRINTER DOWNLOAD CHARACTERS**
- **REDEFINE THE COMPUTER SCREEN FONT**
- **REDEFINE ANY/ALL KEYBOARD KEYS (ASWERTY)**
- **DESIGN SPECIAL SCIENTIFIC CHARACTERS/FONTS**

Takes all the hard work out of character designing making it a pleasure. The printer part of the program will only work if your printer is capable of DOWNLOADING and is EPSON compatible – see your printer manual. Works with 7-bit or 8-bit output (8-bit port). All the designing is done "On-Screen" so you can see exactly what you are doing. You can save your newly designed characters to disc and reload them at any time into a basic program and into most Word-Processors. The program also allows the user to redefine any or all of the keys on the keyboard. This feature will be useful for those who require an ASWERTY keyboard. The disc also contins twelve sample fonts for experimentation
TAPE:- UK £7.99 EUROPE £9.25 – R. of W. £10.00
DISC:- UK £11.99 – EUROPE £13.25 – R. of W. £14.00

FAST FORMATTER

The FASTFORMATTER will format one side of a disc in approx. 30 seconds with the choice of DATA, VENDOR or SYSTEM and its much easier then using your CPM disc
TAPE:- UK £4.50 – EUROPE £5.25 – R.of W. £6.50
DISC:- UK £8.00 – EUROPE £9.25 – R.of W. £10.00

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TYPE-INS

PAT McDONALD steams in with more of your brilliant progs

MULTI FONTS

This RSX command from CHRIS SPIROTIS, who resides in Alexandroupolis, turns the CPC's ordinary mono text into a speckled piebald collage. To switch it on, run the program and type `|FONT.ON`. Inks 1,2 and 3 are used to fill all text printed from now on, with ink 0 as the background as usual. Some unusual effects are possible – like camouflaged text! To turn off the RSX, simply type `|FONT.OFF`.

```
1 'Speckled Font
2 'By Chris Spirotis
3 'Amstrad Action February 1989
10 MEMORY &9FFF:address=&A000:lin=100
20 READ byte$,check$
30 IF byte$="END" THEN CALL &A000:MODE 1:|FONT.ON:
   PRINT"Commands: |FONT.ON , |FONT.OFF installed"
   :|FONT.OFF:END
40 sum=0
50 FOR i=1 TO LEN(byte$) STEP 2
60 j=VAL("&"+MID$(byte$,i,2))
70 POKE address,j:sum=sum+j:address=address+1:NEXT
80 IF sum<>VAL("&"+check$) THEN PRINT "Error in
   data in line ";lin:STOP
90 lin=lin+10:GOTO  20
100 DATA 010EA0210AA0CDD1BCC900,49D
110 DATA 00000016A0C326A0C32DA0,3CF
120 DATA 464F4E542E4FCE464F4E54,3B9
130 DATA 2E4F46C6002134A022D4BD,431
140 DATA C9214B1322D4BDC9FE20DA,5BC
150 DATA 7BA1F5E5214B1322D4BDE1,609
160 DATA 2288A1CD69BB3A88A1473A,520
170 DATA 89A1946778956F242CCD75,533
180 DATA BBF1CD5ABB2A88A1CD1ABC,684
190 DATA 3E013287A106083E02C5F5,3A1
200 DATA 7ECB47C4C1A0CB67C4C1A0,70C
210 DATA 7ECB4FC4D4A0CB6FC4D4A0,742
220 DATA 7ECB57C4E7A0CB77C4E7A0,778
230 DATA 7ECB5FC4FAA0CB7FC4FAA0,7AE
240 DATA 23F1C13DFE00CAA6A0C36C,64F
250 DATA A00578FE00CABAA0C50100,505
260 DATA 08092B2BC13E02C36CA021,358
270 DATA 34A022D4BDC93A87A146FE,5F6
280 DATA 01CA27A1FE02CA2EA1FE03,52D
290 DATA CA35A13A87A146FE01CA3C,54D
300 DATA A1FE02CA43A1FE03CA4AA1,605
310 DATA 3A87A146FE01CA51A1FE02,563
320 DATA CA58A1FE03CA5FA13A87A1,5F0
330 DATA 46FE01CA66A1FE02CA6DA1,5EE
340 DATA FE03CA74A1703E04473A87,49A
350 DATA A13C3287A1B8CA1FA13E00,4B7
360 DATA C93E013287A13E00C9CBC0,4F4
370 DATA CBA0C30DA1CB80CBE0C30D,6A2
380 DATA A1CBC0CBE0C30DA1CBC8CB,7A6
390 DATA A8C30DA1CB88CBE8C30DA1,690
400 DATA CBC8CBE8C30DA1CBD0CBB0,7CD
410 DATA C30DA1CB90CBF0C30DA1CB,6C3
420 DATA D0CBF0C30DA1CBD8CBB8C3,7E5
430 DATA 0DA1CB98CBF8C30DA1CBD8,6E8
440 DATA CBF8C30DA1214B1322D4BD,566
450 DATA CD5ABBC3BAA000000000,3FF
460 DATA END,END ●
```

35,000 PEOPLE DEMAND TO SEE YOUR PROGRAM IMMEDIATELY!

Send us your latest and greatest programming masterpiece and you can share it with 35,000 people – and earn yourself as much as **£100** into the bargain! Everything that appears in this section of the magazine is paid for, and £10 is the very least we pay.

So get to it! Send your listing, together with name, address and SAE (for return) to:

'Type-Ins', *Amstrad Action*, 4 Queen St, Bath, BA1 1EJ.

Here's a few tips that should increase your chance of getting into print:

- Send only your own original, unpublished work
- Enclose a covering letter with a short explanation of what your program does
- REM statements make the program easier to understand
- Use lower-case rather than capitals for variable names
- Do not use as variable names letters that look like numbers (O and Ø, for instance, or l and 1)
- If you're writing in machine code, it would be very helpful to our readers if you include a checksum routine
- Structure your program – divide it into sensible procedures
- Avoid long multi-statements. Short lines make debugging easier
- Test your program thoroughly. When you think it's completely foolproof and perfect, try it out on a friend. Offer them 10p for every bug/problem they find!
- Make sure your name and address is on every single disk, cassette or slip of paper you send us. You wouldn't believe how many items we have received that become separated from their covering letter and then can never be reunited!
- Every so often we invite a *Type-Ins* contributor to write something about their program and/or themselves. So a phone number and an indication that you'd be interested in this would be useful – after all, we pay extra to allow you to tell us how wonderful your listing is!

Hopeless programmers can help too!

But you needn't be a programming genius to help us out. Even if you don't have a wonderful listing for us, you can still play your part in *Type-Ins*. Sometimes a good idea for a program can be just what is needed to set one of our readers off. So if you have a particular problem or idea for an application, share it with us. Send it to the address above – after all, we know thousands and thousands of the best Amstrad programmers around!

GUITAR TRAINER

When Mike Roake isn't busy at the United Mission to Kathmandu (honest!) he likes to relax by practising the guitar. In order to train his ear better he wrote this little program, which could well prove more useful than the average *TypeIn*.

To use it, just enter whether you're a right or left-handed guitarist. The program then plays tones and displays the fingering chord for that tone: you have to enter what you think it is, ie A, B#, F or whatever. Note that the other keys are disabled, so any mistakes are yours!

```
10 'Guitar Trainer
20 'By Mike Roake
30 'Amstrad Action February 1989
40 MODE 1:BORDER 0:DEFINT a-z:DIM note(37)
50 INK 0,0:INK 1,26:INK 2,18:INK 3,0:GRAPHICS
   PEN 1
60 LOCATE 5,3:PRINT "Guitar Fretboard Note Trainer"
70 LOCATE 6,13:PRINT "Right or left handed? (R/L)"
80 select$=UPPER$(INKEY$):IF select$="" THEN 80
90 IF select$="L" THEN right=0 ELSE IF select$="R"
   THEN        right=1 ELSE 80
100 CLS:RANDOMIZE TIME*100
110 FOR note=1 TO 37:READ note(note):NEXT
120 DATA 379,358,338,319,301,284,268,253,239,225
    ,213,201
130 DATA 190,179,169,159,150,142,134,127,119,113
    ,106,100
140 DATA 95,89,84,80,75,71,67,63,60,56,53,50,47
150 sharp$="E F F#G G#A A#B C C#D D#"
160 flat$="E F GbG AbA BbB C DbD Eb"
170 note$="ABCDEFG":ENV 1,1,15,1,3,-1,1,10,-1,50
180 REM * Draw Fretboard Routine *
190 MOVE 20,300
200 FOR string=1 TO 6:DRAWR 600,0:MOVER -600,-30
    :NEXT
210 MOVE 20,300
220 FOR fret=0 TO 12:DRAWR 0,-150:MOVER 50,150
    :NEXT
230 MOVE 615-right*589,300:DRAWR 0,-150
240 GRAPHICS PEN 2
250 FOR i=1 TO 2:ORIGIN 45+right*550,136+i*60
260 GOSUB 770:NEXT
270 FOR i=1 TO 3:ORIGIN 100*i+95+50*right,226
280 GOSUB 770:NEXT
290 REM * Main Routine *
300 LOCATE 9,24:PRINT "Press any key to start"
    :CLEAR INPUT
310 IF INKEY$="" THEN GOTO 310
320 LOCATE 9,2:PRINT "NUMBER CORRECT:    0"
330 LOCATE 9,22:PRINT "   Note? > _";SPC(7)
340 LOCATE 9,24:PRINT SPC(22)
350 start!=TIME/300:correct=0
360 WHILE correct<10
370 string=INT(5.99*RND(2))+1
380 fret=INT(12.99*RND(2))
390 ORIGIN 627-623*right-fret*50*(1-2*right),
    110+string*30
400 GOSUB 810
410 IF string<5 THEN open=1+(string-1)*ELSE open
    =20+(string-5)*5
420 truenote=open+fret
430 SOUND 129,note(truenote),0,0,1
440 SOUND 130,note(truenote)-1,0,0,1
450 IF truenote>12 THEN truenote=truenote-12:GOTO
    450
460 i$=UPPER$(INKEY$):IF i$="" THEN 460
470 IF INSTR(1,note$,i$)=0 THEN 460
480 PEN 1:LOCATE 20,22:PRINT i$;"_"
490 j$=LOWER$(INKEY$):IF j$<>"" THEN 520
500 IF INKEY(79)<>-1 THEN LOCATE 20,22:PRINT "_ ":
    GOTO 460
510 IF INKEY(6)<>-1 OR INKEY(18)<>-1 THEN j$=" ":
    GOTO 550 ELSE GOTO 490
520 IF j$<>"#" AND j$<>"b" AND j$<>"3" THEN 490
530 IF j$="3" THEN j$="#"
540 LOCATE 21,22:PRINT j$
550 i$=i$+j$:answer=INSTR(1,sharp$,i$)
560 IF answer>0 GOTO 580
570 answer=INSTR(1,flat$,i$)
580 answer=(answer+1)/2
590 IF answer=truenote THEN correct=correct+1
    ELSE GOSUB 710
600 GOSUB 850:LOCATE 20,22:PRINT "_";SPC(12)
610 LOCATE 25,2:PRINT USING "###";correct
620 WEND
630 endtime!=TIME/300-start!
640 IF endtime!>60 THEN minutes=INT(endtime!/60)
    ELSE minutes=0
650 seconds!=endtime!-minutes*60
660 LOCATE 9,22:PRINT "Time taken  "
670 LOCATE 21,22:PRINT USING "##";minutes;:PRINT
    ":"
680 LOCATE 24,22:PRINT USING "##.#";seconds!
690 correct=0:GOTO 300
700 REM * Wrong answer subroutine *
710 SOUND 129,0,1,0
720 FOR i=1 TO 3:SOUND 1,1000,20:SOUND 1,500,20:
    NEXT
730 true$=MID$(sharp$,2*truenote-1,2)
740 LOCATE 20,22:PRINT "Correct is ";true$
750 FOR i=1 TO 1800:NEXT:RETURN
760 REM * Draw fret marker subroutine *
770 MOVER -4,6:DRAWR 8,0:MOVER -10,-2
780 FOR j=1 TO 5:DRAWR 12,0:MOVER -12,-2:NEXT
790 MOVER 2,0:DRAWR 8,0:RETURN
800 REM * Draw note marker subroutine *
810 GRAPHICS PEN 1
820 DRAW 0,20:DRAW 8,20:DRAW 8,0:DRAW 0,0
830 MOVE 5,5:FILL 1:MOVE 5,15:FILL 1:RETURN
840 REM * Erase note marker subroutine *
850 GRAPHICS PEN 3:MOVE -2,-2
860 DRAW -2,22:DRAW 10,22:DRAW 10,-2:DRAW -2,-2
870 MOVE 0,0:FILL 3:GRAPHICS PEN 1:MOVE -2,10
880 IF fret>0 THEN DRAW 10,10:RETURN ELSE RETURN ●
```

BRAINBOX

ALAN MACDONALD, of the Isle of Lewis, has put thought into his programming. 'Rather than write a one off quiz program', he wondered, 'why not do one that can be altered to whatever subject you want?' And so *Brainbox* was born. It's a geography test, but changing it to cover another area is easy – full details below. To take a test, just RUN the program. At the end the program tells you how well you did.

```
1 ' Brainbox/Geography Test
2 ' By Alan MacDonald
3 ' Amstrad Action January 1989
10 CLS: PRINT:PRINT " BRAINBOX ": PRINT
   "----------"
20 LET n=30:LET w=0: LET r=0: PRINT
23 ' DATA
25 ' COUNTRY AND CAPITAL
27 '
30 DATA "FRANCE","PARIS"
40 DATA "THE USA","WASHINGTON"
50 DATA "WEST GERMANY","BONN"
60 DATA "EAST GERMANY","BERLIN"
70 DATA "ENGLAND","LONDON"
80 DATA "WALES","CARDIFF"
90 DATA "SCOTLAND","EDINBURGH"
100 DATA "SPAIN","MADRID"
110 DATA "CHINA","PEKING"
120 DATA "ITALY","ROME"
130 DATA "GREECE","ATHENS"
135 DATA "BULGARIA","SOFIA"
140 DATA "THE USSR","MOSCOW"
145 DATA "BELGIUM","BRUSSELS"
150 DATA "POLAND","WARSAW"
155 DATA "AUSTRIA","VIENNA"
160 DATA "PORTUGAL","LISBON"
165 DATA "THE NETHERLANDS","AMSTERDAM"
170 DATA "ICELAND","REYKJAVIK"
175 DATA "FINLAND","HELSINKI"
180 DATA "JAPAN","TOKYO"
185 DATA "DENMARK","COPENHAGEN"
190 DATA "NORTHERN IRELAND","BELFAST"
195 DATA "SWITZERLAND","BERNE"
200 DATA "THE REP OF IRELAND","DUBLIN"
205 DATA "BRAZIL","BRAZILIA"
210 DATA "HUNGARY","BUDAPEST"
220 DATA "ROMANIA","BUCHAREST"
230 DATA "NORWAY","OSLO"
240 DATA "YUGOSLAVIA","BELGRADE"
245 '
247 ' ADD SOME MORE IF YOU WANT
249 '
250 FOR i=1 TO n: READ x$,y$
260 PRINT "WHAT IS THE CAPITAL OF ";x$;"?": INPUT
    w$:z$=UPPER$(w$)
270 IF y$=z$ THEN LET r=r+1:PRINT "CORRECT"
275 IF y$<>z$ THEN LET w=w+1: PRINT "WRONG IT WAS
    ";y$;" .": PRINT
280 NEXT i: PRINT "YOU WERE ASKED ";n;" QUESTIONS"
290 PRINT "YOU GAVE ";r;" CORRECT ANSWERS"
300 PRINT "YOU GAVE ";w;" WRONG ANSWERS"
305 '
307 ' HOW WELL YOU DID
309 '
310 IF r=n THEN PRINT "WELL DONE BRAINBOX!! YOU'VE
    PASSED"
320 IF r=0 THEN PRINT "HAVE YOU EVER DONE
    GEOGRAPHY BEFORE ?"
330 IF r=w THEN PRINT "HALF CORRECT"
340 IF r>w AND r<n THEN PRINT "NOT BAD.....TRY
    AGAIN "
```

DO IT YOURSELF

To insert your own data, it's a good idea first to make plenty of space for it. So type **RENUM 60000,250,10**. This gives you room for about 5,975 additional questions, bearing in mind that you'll probably run out of memory way before that number is reached.

Next put the data in from line 30 onwards. The way it's set out is question, then answer. After you've done that then alter line 260 so that the question is phrased properly (if you were doing a book and author test, the question, 'What is the capital of *War and Peace*' would no doubt bring much merriment). And alter line 320, inserting the correct subject for the test. Finally, you have to insert the number of questions that you want asked: put **LET n=** the number you want in line 20.

Sound to light

Here's an excellent program for those lucky people who own a Ram Music Machine, courtesy of Justin Grimley of Armagh. Just plug in the microphone, run the listing below and you get a colourful display on your monitor or TV in time to the beat of sounds going in through the microphone.

When using it, adjust the slider control on the interface to find the best trigger point for the effects.

```
10 ' Sound To Light Generator
20 ' Justin Grimley
30 ' Amstrad Action March 89
40 '
50 '
60 ON BREAK GOSUB 140
70 MODE 0:BORDER 0:INK 0,0
80 x=0
90 FOR a=1 TO 250:PEN RND*15:PRINT
   CHR$(143);CHR$(143);:NEXT
100 OUT &F8F8,1:v=INP(&F8F4)
110 IF v>127 AND v<132 THEN INK
    RND*15,0:GOTO 130
120 INK RND*15,v/11
130 GOTO 100
140 MODE 2:CALL &BC02:INK 1,24:INK
    0,1:PEN 1: PAPER 0
```

NEAR/NEAR LETTER QUALITY

This one's from SIMON KNIGHTS, of Sutton Coldfield. If you want to print out letters etc, you buy a printer. But some printers don't support the NLQ (Near Letter Quality) mode that provides excellent results.

That's where *Near/Near Letter Quality* comes in. Now you can print out files saved onto a tape or disk in a much neater (albeit smaller) font. Two quality settings are available: number one is faster, but number two looks better.

```
10 'NLQ mode for none NLQ printers
20 'By Simon Knights
30 'Amstrad Action March 1989
40 'Redefine problem characters
45 centre=8:GOSUB 1000:'Centre=number of spaces
   printed before start of text.Alter to make
   text fit in the middle of the page
50 SYMBOL AFTER 44
60 SYMBOL 95,0,0,0,0,0,0,255,0
70 SYMBOL 103,0,0,&X111110,&X1100110,&X111110,
   &X110,&X1111100,0
80 SYMBOL 106,&X10,0,&X1110,&X110,&X1100110,
   &X1100110,&X111100,0
90 SYMBOL 112,0,0,&X11011100,&X1100110,&X1111100,
   &X1100000,&X11110000,0
100 SYMBOL 113,0,0,&X1110110,&X11001100,&X1111100,
   &X1100,&X11110,0
110 SYMBOL 121,0,0,&X1100110,&X1100110,&X111110,
   &X110,&X1111100,0
120 SYMBOL 44,0,0,0,0,&X11000,&X11000,&X110000,0
130 SYMBOL 59,0,&X11000,&X11000,0,&X11000,&X11000
   ,&X110000,0
150 CLS:MODE 2:PRINT "Hello and welcome to N/NLQ."
   :INPUT "Do you wish to use the 1 or 2 pass
   print (1/2)";pass:IF pass<>1 AND pass<>2 THEN
   GOTO 150 ELSE pass=pass-1
155 ON ERROR GOTO 2000
160 INPUT "Please enter filename ";a$
170 OPENIN a$
180 LINE INPUT#9,a$:CLS:PRINT a$:'Print one line
   of text
185 FOR flag=0 TO pass
187 FOR a=1 TO centre:PRINT #8," ";:NEXT
190 PRINT #8,CHR$(27);"Z";CHR$(flag);CHR$(5);
195 IF flag=1 THEN PRINT #8,CHR$(0);
196 'Output line of text to printer
200 FOR x=0 TO 639
210 MOVE x,385
220 CALL &B000
230 NEXT x
250 IF flag=0 THEN PRINT #8,CHR$(13);
270 NEXT flag
275 PRINT #8
280 GOTO 180
999 'Poke M/Code in
1000 FOR a=&B000 TO &B000+46:READ b$:POKE a,VAL
   ("&"+b$):NEXT
1010 RETURN
2000 'Error routine
2010 'Picks up EOF
2020 CLOSEIN
2030 PRINT "That's all folks":INPUT "Unless you
   want to NNLQ another document (Y/N)",a$
2040 IF LOWER$(a$)="y" THEN GOTO 150
2050 PRINT "O.K. then,abandon me to lie unused
   on some sector in a magnetic wasteland of a disc!"
2060 END
2999 'Data for M/Code
3000 DATA 3E,00,06,07,11,00,00,C5
3010 DATA F5,21,02,00,CD,F3,BB,FE
3020 DATA 00,20,11,F1,CB,3F,C1,10
3030 DATA EB,CD,2B,BD,30,0B,CD,2B
3040 DATA BD,30,08,C9,F1,CB,FF,18
3050 DATA EB,18,EE,18,F1,00,00,00 ●
```

Alien languages

Here's a couple of Logo listings from VINCENT LAHIFF of Mungret. Logo comes free with disk drive systems, so plenty of people should be able to use them! The first program simply draws a face on the screen. The second (and shorter) listing gives a ticking clock with a moving hand.

If you'd like more 'alien language' *TypeIns* let us know and we'll gladly oblige.

Face

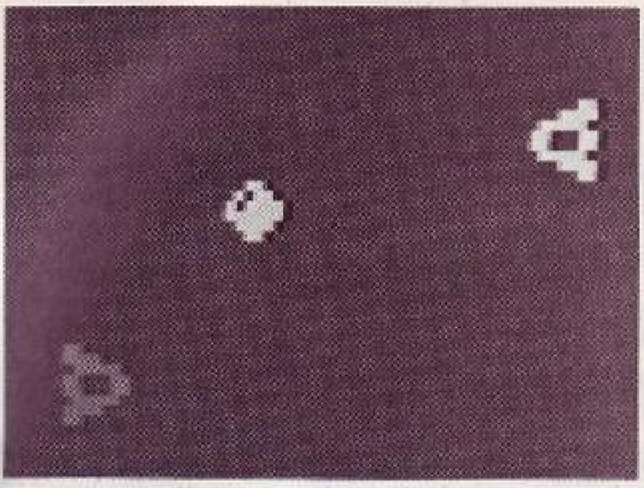
```
to m1
pu
lt 90
fd 200
pd
rt 90
end
to face
setbg 0
setpc 2
cs
ht
fs
m1
o1
m2
eye
m3
eye
m4
mouth
end
to o1
repeat 360 [fd 3 rt 1]
end
to m2
rt 90 pu fd 70 lt 90 fd
50 pd
end
to eye
repeat 360 [fd 0.5 rt 1]
end
to m3
pu
rt 90
fd 150
lt 90
pd
end
to m4
pu
bk 80
rt 90
fd 40
rt 90
pd
end
to mouth
repeat 180 [fd 1.5 rt 1]
end ●
```



Clock

```
to beep
sound [2 22 27]
sound [3 34 18]
sound [1 23 10]
end
to clock
setbg 2
setpc 0
cs
fs
ht
ol
hand
beep
hand
end
to ol
cs
repeat 12 [pu fd 100 pd
  fd 20 bk 20 pu bk 100
  rt 30]
end
to hand
repeat 180 [fd 100 pe bk
100 rt 2 pd]
end ●
```





SPACE HOCKEY

Here's an absolute corker of a game listing from David Hay, an Australian. It's a competitive two player sports game – you have to score with the ball in your opponent's goal. Diagonal shots are possible, and the ball rebounds if you hit it into the edge of the playing area.

To move the characters, one person should use the cursor keys: the other should use the joystick. Pressing the fire button or COPY results in the relevant player being teleported back to defend the goal.

```
10 ' Space-Hockey
20 ' David Hay
30 ' Amstrad Action March 1989
40 MODE 1:CLS
50 PRINT"        S P A C E - H O C K E Y"
60 LOCATE 1,15
70 PRINT"              <FIRE> TO START"
80 IF INKEY(76)>-1 OR INKWY(9) >-1 THEN
   100 ELSE 60
90 ' SET UP SCREEN
100 INK 0,0:PEN 1:PAPER 0
110 t%=1000:BORDER 11:CLS
120 ' CHARACTERS
130 SYMBOL AFTER 92
140 SYMBOL 93,24,60,102,195,129,0,0,0
150 SYMBOL
251,0,24,60,36,102,102,255,219
160 SYMBOL
252,219,255,102,102,36,60,24,0
170 SYMBOL 253,3,15,62,99,99,62,15,3
180 SYMBOL 254,192,240,124,198,
   198,124,240,192
190 SYMBOL 255,24,44,94,126,60,24
200 ' GAME SCREEN
210 x%=5:y%=16:a%=35:b%=5:g%=20:h%=11
220 LOCATE 1,23
230 PRINT"]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]]"
240 LOCATE 1,24
250 PRINT"   S P A C E - H O C K E Y   "
260 LOCATE 1,25
270 PRINT"   1:                          2:"
280 LOCATE 6,25:PRINT xs%
290 LOCATE 36,25:PRINT as%
300 LOCATE 1,5:PRINT"="
310 LOCATE 40,5:PRINT"="
320 LOCATE 1,17:PRINT"="
330 LOCATE 40,17:PRINT"="
340 s%=253:p%=254
350 LOCATE x%,y%:PRINT CHR$(254)
360 LOCATE a%,b%:PRINT CHR$(253)
370 PEN 2:LOCATE g%,h%
380 PRINT CHR$(255):PEN 1
390 ' MAIN PROG
400 ox%=x%:oy%=y%:oa%=a%:ob%=b%
410 og%=g%:oh%=h%:t%=t%-1
420 LOCATE 18,25:PRINT t%
430 IF t%=0 THEN 1090
440 ' CONTROL
450 IF INKEY(9)>-1 THEN a%=39
460 IF INKEY(0)>-1 THEN b%=b%-1:s%=251
470 IF INKEY(2)>-1 THEN b%=b%+1:s%=252
480 IF INKEY(8)>-1 THEN a%=a%-1:s%=253
490 IF INKEY(1)>-1 THEN a%=a%+1:s%=254
500 IF INKEY(76)>-1 THEN x%=2
510 IF INKEY(72)>-1 THEN y%=y%-1:p%=251
520 IF INKEY(73)>-1 THEN y%=y%+1:p%=252
530 IF INKEY(74)>-1 THEN x%=x%-1:p%=253
540 IF INKEY(75)>-1 THEN x%=x%+1:p%=254
550 IF x%>39 THEN x%=39
560 IF x%<2 THEN x%=2
570 IF a%<2 THEN a%=2
580 IF a%>39 THEN a%=39
590 IF b%<1 THEN b%=1
600 IF b%>22 THEN b%=22
610 IF y%<1 THEN y%=1
620 IF y%>22 THEN y%=22
630 ' PRINT CHARACTERS
640 LOCATE ox%,oy%:PRINT" "
650 LOCATE oa%,ob%:PRINT" "
660 PEN 11:LOCATE x%,y%:PRINT CHR$(p%)
670 PEN 1:LOCATE a%,b%:PRINT CHR$(s%)
680 ' COLLISION DETECTION
690 IF x%=g%-1 AND y%=h% OR a%=g%-1 AND
   b%=h% THEN 780
700 IF x%=g%+1 AND y%=h% OR a%=g%+1 AND
   b%=h% THEN 790
710 IF x%=g% AND y%=h%-1 OR a%=g% AND
   b%=h%-1 THEN 800
720 IF x%=g% AND y%=h%+1 OR a%=g% AND
   b%=h%+1 THEN 810
730 IF x%=g%-1 AND y%=h%-1 OR a%=g%-1
   AND b%=h%-1 THEN 820
740 IF x%=g%+1 AND y%=h%-1 OR a%=g%+1
   AND b%=h%-1 THEN 830
750 IF x%=g%+1 AND y%=h%+1 OR a%=g%+1
   AND b%=h%+1 THEN 840
760 IF x%=g%-1 AND y%=h%+1 OR a%=g%-1
   AND b%=h%+1 THEN 850
770 GOTO 400
780 g%=g%+5:GOTO 860
790 g%=g%-5:GOTO 860
800 h%=h%+5:GOTO 860
810 h%=h%-5:GOTO 860
820 g%=g%+5:h%=h%+5:GOTO 860
830 g%=g%-5:h%=h%+5:GOTO 860
840 g%=g%-5:h%=h%-5:GOTO 860
850 g%=g%+5:h%=h%-5
860 SOUND 1,30,10,7
870 IF g%<2 AND h%<17 AND h%>5 THEN 970
880 IF g%>39 AND h%<17 AND h%>5 THEN 1010
890 IF g%>38 THEN g%=38
900 IF g%<3 THEN g%=3
910 IF h%>21 THEN h%=21
920 IF h%<2 THEN h%=2
930 PEN 2:LOCATE og%,oh%:PRINT" "
940 LOCATE g%,h%:PRINT CHR$(255)
950 PEN 1:GOTO 400
960 ' GOAL SCORED
970 g%=1:LOCATE og%,oh%:PRINT" "
980 LOCATE g%,h%:PRINT CHR$(255)
990 as%=as%+1:g%=1
1000 GOTO 1040
1010 g%=40:LOCATE og%,oh%:PRINT" "
1020 LOCATE g%,h%:PRINT CHR$(255)
1030 xs%=xs%+1:g%=40
1040 FOR fx%=5 TO 15 STEP 1
1050 SOUND 2,0,15,5,0,0,fx%
1060 NEXT
1070 p%=254:s%=253:CLS:GOTO 210
1080 ' END GAME
1090 FOR fy%=5 TO 15:SOUND 1,fy%,10,7
1100 NEXT fy%
1110 CLS
1120 PRINT"     G  A  M  E    O  V  E  R"
1130 LOCATE 1,5
1140 PEN 11:PRINT"PLAYER 1:";xs%
1150 LOCATE 1,10
1160 PEN 1:PRINT"PLAYER 2:";as%
1170 LOCATE 1,20
1180 PRINT"         <FIRE> TO PLAY AGAIN"
1190 IF INKEY(76)>-1 OR INKEY(9)>-1 THEN
   40 ELSE 1190 ●
```



AA BUYERS GUIDE

Part One: VISION

Advanced Art Studio

ECC, £19.95 128K disk only ● *AA21*
The most powerful and the best art package for the CPC, *Art Studio* has yet to have anything come close to it. It works in all three modes and you can cut and paste different areas, transformations and reflections. Fill routines fill in a particular coloured pattern. It's user-friendly as well. Cycling through the inks is supported too. Also available as a standard version at £15.95.



AMX Art

Advanced memory systems, £69.95 (including mouse), disk only ● *AA7*
The all in one art program and mouse package. The art program is a little unsophisticated compared to *Advanced Art Studio*, but having a mouse to use on an art program really does help. It's got colour, spraycans, textures, circles and a host of other features. Very user-friendly.

AMX 3D Zicon

Advanced Memory Systems, £39.95 disk only ● *AA24*
Another product that benefits from using with a mouse, it can be used to produce wire frame constructions on your computer screen. Design objects in three dimensions and view them from different angles. The program produces impressive displays, but it slows down when performing a lot of mathematical functions.

Note: supplies are scarce, and AMS don't plan to duplicate any more copies.

Cherry Paint

Siren Software, £9.99 disk only ● *AA20*
Totally WIMP controlled – that is, using a mouse you move a pointer around to various pictures (icons) to pull down various menus. Black and white mode 2 only, but the program really is fun to play with. Some functions are missing (curves are difficult, for instance), but at the price it's a bargain.

CRL Image System

CRL, £14.95 tape 14.95 disk ● *AA12*
Boasting a range of picture manipulations and distortions, this program was designed to give you some real graphical power. Unfortunately it was let down by lack of art options. Fascinating to see it go to work on finished pictures though – sort like a mini Quantel box.

Dart Scanner

Dart Electronics, £79.95 ● *AA22*
You attach a reading device to your DMP2000, 3000 or 3160. Feed in a picture to the printer as if you were going to print on it. Then the device reads in the picture to your CPC as a black and white image. Quality of the picture on-screen isn't amazing but it works, it's cheap and it's a lot of fun.

Electric Studio Light Pen

Electric Studio, £19.95 tape, £29.95 disk, ● *AA1*
A good pen with excellent drawing software, including functions such as rubber-banding shapes and lines, filling different areas, spray-can and so on. If you're very clever you can even write your own software for it.



The Informer

Treasure Island Software, £29 disk only ● *AA33*
Used to create animated displays, suitable for use in a classroom or a shop window. It works best with *Parrotry Plus*, but other art packages can be used. *Informer* takes all the text, graphics and animated displays and then produces a slide show to taste.

Model Universe

Arnor, £15.95 tape, £19.95 disk ● *AA16*
A similar program to *3D Zicon*, *Model Universe* is a 3D design program. Although offering similar features it isn't quite as user-friendly, but it's cheaper. Interesting to experiment with, and the manual is excellent. *Model Universe* supports the Tandy CGP 115 and MCP40 plotters which can give blueprints of your designs.

Parrotry Plus

Treasure Island Software, £19.95, disk only ● *AA30*
A novel approach to creating graphic art. Rather than having lots of effects which can be used anywhere and any time to create a finished product, *Parrotry Plus* remembers every alteration you make to the screen, and you play through this list to create an animation sequence. Not the easiest thing in the world to understand at first, but you soon get the hang of it. Note: you can't dump pictures to a printer without an external program.

Vidi Digitizer

Rombo Productions, £89.95 ● *AA15*
One of the more expensive peripherals, *Vidi* can grab a picture (from a video recorder or camera) and stick it in your CPC's screen. Then you can play about with it using art packages or whatever. *Vidi* is very easy to use, and although not exactly useful it is nevertheless an intriguing piece of machinery. The software is supplied on tape, disk or ROM and includes a very good printer dump routine.

Part Two: SOUND

Amdrum

Cheetah, £34.95 ● *AA*13

A digital drum machine designed to be controlled by a CPC. Tape and disk versions available. The editor for Amdrum is pretty comprehensive, if a little plain looking. It is not a Midi compatible instrument and to hear the output you have to plug the Amdrum into a separate amplifier.



DHCP Midi Interface

DHCP, £69.95 interface, £34.95+ disk software ● *AA*33

DHCP produce their own Midi interface, which is up to scratch as far as it goes. However, they also have a policy of bringing out their Midi software for all the various Midi interfaces for the CPC's, which are incompatible with each other. These include an 8 Track Sequencer, Casio CZ voice editor and FB01 editor amongst many others. Dave Hickford produces customised software support if you're willing to pay the price. (Jean Michel Jarre was prepared to shell out to them for software for his laserharp, played at the Docklands concert last year.)

Micro Music Creator

First Byte Software, £9.95 tape, £14.95 disk, £24.95 ROM ● *AA*38

The first part is a music composer, a program that lets you put staves and notes on the screen, and play the tune to make sure it's right. Some musical features can't be inserted, such as accents. The opther side is a sampler to capture sounds from a tape and play them through your CPC. Effort is required to make the most out of it, but excellent effects can be generated.

Miditrack Performer

EMR, £92.50 cass & disk ● *AA*13

A Midi interface, plus some sequencing software to drive Midi equipped instruments such as synthesizers, drum machines and so on. It records what you want each instrument to play, and then plays all the instruments at once. The onscreen layout is similar to a multi-track recorder, and is not hard to get to grips with. Excellent if you have a Midi instrument or two: pointless otherwise.



● The **Advanced Music System** is unfortunately no longer available, but there's just a chance it may become so again in the future. Watch this space!

Ram Music Machine

RAM Electronics, £49.95 tape, £59.95 disk ● *AA*17

An all in one music package: you get a Midi interface, a sound sampler and a music editor. The sampler can handle sounds of just over a second long, but only one such sample can be held at a time. The music editor is comprehensive, and the Midi controller software is competently done. One problem is that there is no through port, so 464 users have to use the tape version. And you can't edit live played Midi compositions.

Silicon Systems Midi Interface

Silicon Systems, £59.95 interface, £59.95 software ● *AA*26

Useless on its own, but the range of software that you can use with it (for different synths) is wide – DX7, FB01, MT32, D50 and CZ101. Software packages vary in price, and lack the presentation of the EMR sequencer. What they lack in looks they make up for in performance – they certainly boost the power of your synth.

Sound Blaster

Siren Software, £29.99 ● *AA*23

An amplifier and a pair of loudspeakers to plug into your Amstrad to deliver more volume and tonal quality to CPC sound effects. Performs well, though it delivers a maximum of two watts through each speaker – they are capable of taking 20. On the other hand, 20 watts would probably be enough to blow your ears off.

Speech Synthesizer

Dk/Ram Electronics, £35 tape, £40 ROM

An add-on that you plug into the back of your computer which can then produce speech by means of RSX's, either through the loudspeakers supplied with it or through your Amstrad. The only problem is that you can't use it to include speech in a program for somebody else's computer. Excellent speech quality, and with the external speakers it's pretty good value. ●

☎ Contacts

Advanced Memory Systems ☎ 0925 413501, 160/170 Wilderspool Causeway, Warrington, WA4 6QA

Arnor ☎ 0733 68909, 611 Lincoln Rd, Peterborough PE1 3HA

Cheetah Marketing ☎ 0222 555525, Norbury House, Fairwater, Cardiff, CF5 3AS

CRL ☎ 01 533 2918, CRL House, 9 Kings Yard, Carpenters Road, London

Dart Electronics ☎ 0502 513707, Unit B5, Oulton Works, School Rd, Lowestoft, Suffolk, NR33 9NA

DHCP, ☎ 0440 61207, 32 Boyton Close, Haverhill, Suffolk, CB9 0DZ

Electric Studio ☎ 0462 420222, Unit 8, Cam Centre, Wilbury Way, Hitchin, SG4 0TW

EEC ☎ 0753 888866, 18-21 Misbourne House, Chiltern Hill, Chalfont St Peter, Bucks

EMR ☎ 0702 335747, 14 Mount CLose, Wickford, Essex

First Byte Software ☎ 0225 765086, 71 Barn Glebe, Trowbridge, Wilts. BA14 7J2

RAM Electronics ☎ 0252 850085, Unit 16, Redfields Industrial Park, Redfield Lane, Church Crookham, Aldershot, Hants GU13 0RE

Rombo Productions ☎ 0506 39046, 107 Raeburn Rigg, Livingston, EH54 8PH

Silicon Systems ☎ 061 848 8959 Trafford Technology Centre, 43 Elsinore Rd, Manchester, M16 0WG

Siren Software ☎ 061 228 1831, 2-4 Oxford Road, Manchester, M1 5QE

Treasure Island Software ☎ 0492 593549, 4 Dalar Llas, Glan Conwy, Colwyn Bay, Clwydd LL28 5BZ

Don't miss the next *AMSTRAD ACTION*-packed issue – out on *MARCH 9th!*

AAfterthought

And now the end is near, and so we face the final curtain (for this month)...

The CPC character set

3. The would-be magazine writer



Ignoring the fact that he has no experience to speak of, a hilariously inadequate technical knowledge and a general vocabulary only slightly larger than The Hobbit *adventure game, he decides to become A Computer Magazine Writer (he would be a journalist, but he can't spell that). Inspired by the fact that he once had printed in AA a letter and a solution to an adventure game that was only a couple of years out of date (and mostly wrong), he decides he's got what it takes.*

He writes daily at inordinate length, demanding that Action Test *be removed and replaced with 14 pages of 'You'll Never Guess What Happened To Me This Month, It Was Ever So Funny'. He's too impatient to wait for the editorial go-ahead – which is a little slow in coming, for some reason – so he'll write the first year's worth and make a good impression.*

Waiting the five minutes for Mini Office *to load on tape can be boring: when the £1 a word starts coming in, he'll upgrade to* Easi-Amsword *and start some serious word processing. Who knows, he may even buy a disk drive!*

When he's not hunched over his keyboard, you'll find him hanging around the mags section of WH Smith, hoping he'll spot someone reading AA. Aha! There's one! No hope of escape. The accidental bump, the apology, the casual, 'You read AA? So do I!' and then the clincher, the line about 'being in the biz'. Before you can say Alan Sugar he'll have given a detailed account of how he singlehandedly runs the mag – except for the mistakes, of course (what mistakes? – ed.) – and insists on forcing upon the hapless victim his misspelt autograph.

Another pastime is doing the rounds of computer and electrical shops – at least, the ones he's not barred from. He thinks nothing of interrupting some hapless salesman's spiel and offering his own independent 'expert' advice to a decreasingly interested customer who has just remembered an urgent appointment elsewhere.

He's happy in his own strange way. And soon, of course, the call-up will come. Any day now. Any day... tomorrow, perhaps?

Yes, we *know* we promised you the technical type this month, but ANDREW PERRY – who earns himself £25 and our undying gratitude (we're forever in your debt Andrew: and we mean that most literally) – saved us the bother of writing one with this sharply observed contribution. Boffin next month, we promise (ie hope)!

Avoid the queues!

To the newsagent: *Amstrad Action is distributed by Seymour Press*

Dear newsagent,
Please reserve me one copy of the April *Amstrad Action*, due out on 9 March

Name:

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Next month's packed issue includes reviews of Database's new educational program and a £100 betting package, heaps of red-hot games reviews *plus* all the regulars *and* one or two special surprises (translation: how the blank can we fill all those pages?).

And if you've been having problems getting your hands on a copy, why not reserve one? Your newsagent will be ever so glad to oblige. Just hand him or her this reservation slip and make life a little easier.

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See page 74 for details of Voucher scheme.

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SEE OVER PAGE FOR ORDER FORM

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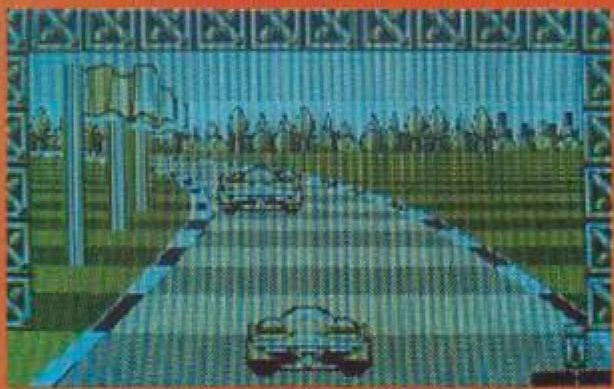
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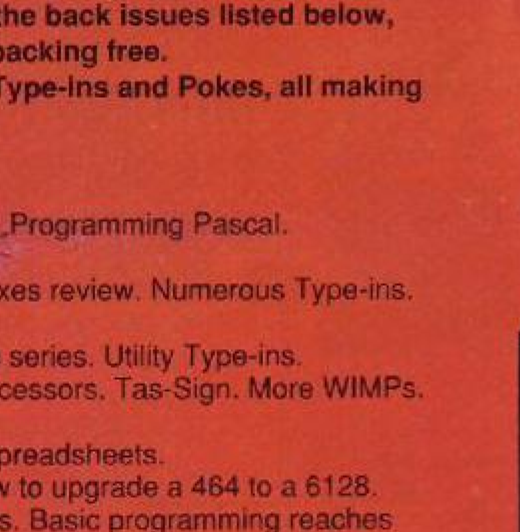
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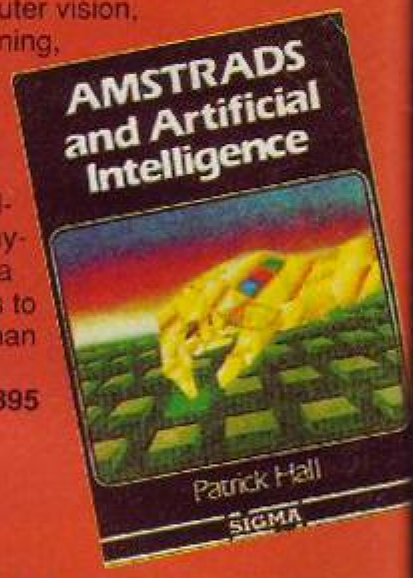
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